

**Cherokee National Forest  
Tellico Ranger District**

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**Travel Analysis Process  
Report**

**Conasauga and Wildcat Creeks Ecosystem  
Assessment Area**

**February 2012  
2/22/12**

## Background

In August 1999, the Washington Office of the USDA Forest Service published Miscellaneous Report FS-643 titled Roads Analysis: Informing Decisions about Managing the National Forest Transportation System. The objective of roads analysis is to provide decision makers with critical information to develop road systems that are safe and responsive to public needs and desires, are affordable and efficiently managed, have minimal negative ecological effects on the land, and are in balance with available funding for needed management actions.

In January 2001, the agency published the Transportation Final Rule and Administrative Policy authorizing units to use, as appropriate, the road analysis procedure embodied in FS-643 to assist land managers making major road management decisions.

*The 2005 Travel Management Rule was developed in response to Forest Chief Dale Bosworth's 4 key threats to the national forests and national grasslands – specifically the 4<sup>th</sup> threat of “unmanaged recreation”. The rule dealt with how motor vehicles are used on the national forests and national grasslands units. It reorganized the Forest Service travel management regulations found in CFR 212. The rule created parts A, B, and C, moving the bulk of what was called the “2001 Roads Rule” into the new Subpart A.*

*In addition to reorganizing the Forest Service travel management regulations, the new rule also updated terminology. The terms “forest transportation system” and “unauthorized road” were introduced and the previous terms were made obsolete.*

*The bulk of the new requirements included as part of the new “2005 Travel Management Rule” were organized into the new Subpart B of the regulations. These focused on designation of roads, trails, and areas for motor vehicle use on National Forest Service lands.*

*The new policy made some changes to the previous process called “roads analysis” or RAP. The new established process was called “travel analysis” and the scope was expanded to now include trails and areas in addition to roads. Some of the procedures were streamlined, but the same six-step process that was previously used was carried forward into the travel analysis process. A complete inventory of unauthorized routes is no longer required.*

*Sub-Part A Travel Analysis is required by the 2005 Travel Management Rule (36 CFR 212.5). Forest Service Manual 7712 and Forest Service Handbook 7709.55-Chapter 20 provide specific direction, including the requirement to use a six step interdisciplinary, science-based process to ensure that future decisions are based on an adequate and balanced consideration of environmental, social and economic impacts of roads. The travel analysis process (TAP) report It is intended to inform future proposed actions related to identifying the minimum road system. The TAP process is designed to work in conjunction with other frameworks and processes, the results of which collectively inform and frame future decisions executed under NEPA.*

The Federal Register Notice (73 FR 74689) for the **final travel management directives** was published on December 9, 2008. The directives became effective January 8, 2009 (Forest Service Manual (FSM) 7700 – Travel Management). FSM 7703.25 changes the term “roads analysis” to “travel analysis”. Consequently, the terms are changed in this document to reflect the current direction unless there are references from previous documents using the term “roads analysis.”

These directives require that a travel analysis is conducted to inform decisions related to:

- a. Identification of the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of National Forest System (NFS) lands per 36 CFR 212.5(b)(1).
- b. Designation of roads, trails and areas for motor vehicle use per 36 CFR 212.51.

## PROCESS

Travel analysis is a six-step process. The steps are designed to be sequential with the understanding the process may require feedback among steps over time as an analysis matures. The amount of time and effort spent on each step differs by project, based on specific situations and available information. The process provides a set of possible issues and analysis questions for which the answers can inform choices about the travel management. Decision makers and analysts determine the relevance of each question, incorporating public participation as deemed necessary.

- Step 1. Setting up the Analysis
- Step 2. Describing the Situation
- Step 3. Identifying Issues
- Step 4. Assessing Benefits, Problems and Risks
- Step 5. Describing Opportunities and Setting Priorities
- Step 6. Reporting

The analysis is an integrated ecological, social, and economical approach to transportation planning that addresses both existing and future transportation system (USFS, 1999a). This analysis follows the process outlined in the document “Roads Analysis: Informing Decisions About Managing The National Forest Transportation System,” (USFS, 1999a). *This is not a NEPA document*, but rather a site specific NFMA analysis for the Conasauga and Wildcat Creeks Assessment Area. This area encompasses approximately 20,396 acres of National Forest System lands within Compartments 64-68, 77, 78, 87, 101, 103, 107-112, 115, 124, 418, and 433. This NFMA analysis defines the existing and desired conditions of the transportation system, and opportunities are identified to move towards the desired condition.

This analysis provides a framework to identify travel related concerns and management opportunities that can be incorporated into subsequent projects being evaluated through the NEPA process. This analysis will assist in the decisions involving transportation systems in the Conasauga and Wildcat Creeks Assessment Area.

## PRODUCTS

The product of an analysis is a report for decision makers and the public that documents the information and analyses used to identify opportunities and set priorities for future national

forest travel management. Included in the report is a map displaying the known transportation system for the analysis area, and the needs and opportunities for each road and trail, or segment of road or trail. A complete list of all the maps is included in Step 6. This report will:

- Identify needed and unneeded roads, trails, and areas for motor vehicle use;
- Identify travel-associated environmental and public safety risks;
- Identify site-specific priorities and opportunities for travel-related improvements and decommissioning;
- Identify areas of special sensitivity or any unique resource values.

## THIS REPORT

This report documents the travel analysis procedure used for the Conasauga and Wildcat Creeks Ecosystem Assessment Area (wherever analysis area is referenced in this document, it corresponds to the Conasauga and Wildcat Creeks Ecosystem Assessment Area boundary). This report is a “living” document and reflects the conditions of the analysis area at the time of writing. The document can be updated as the need arises and conditions warrant. Any future updates will be reflected in the title (e.g., version 2.0).

## STEP 1 SETTING UP THE ANALYSIS

### Purpose and Products

The purposes of this step are to:

- Identify the geographic scale or scales for the analysis,
- Develop a process plan for conducting the analysis, and
- Clarify the roles of technical specialists and line officers in the team.

The products of this step are:

- A statement of the objectives of the analysis,
- A list of interdisciplinary team members and participants,
- A list of information needs, and
- A plan for the analysis.

### Objectives of the Analysis

This travel analysis is specific to the project scale; it is being completed for the Conasauga / Wildcat Ecosystem EA. Unless otherwise stated, the boundary for this travel analysis will match the Conasauga and Wildcat Creeks Ecosystem Assessment Area boundary. (See maps in Appendix A.)

This report analyzes all the roads, trails, and areas for motor vehicle use in the analysis area – including the classified (existing Forest Service system roads), temporary, and unclassified roads and trails (see Step 2 for definitions). It will describe opportunities and set priorities; and some of these opportunities will be carried forward in the Conasauga / Wildcat Ecosystem EA.

### Interdisciplinary Team Members and Participants

Member	Title	Role for Travel Analysis
Janan Hay	Planning Team Leader	Team Leader
Bob Lewis	Silviculturist	Vegetation
Mary Dodson	Wildlife Biologist	Wildlife Habitat/T&E
Jim Herring	Fisheries Biologist	Fisheries Habitat/T&E
Mark Pistrang	Botanist/Ecologist	Ecology/T&E
Gary Hubbard	Engineer	Transportation Planner
Quentin Bass	Archeologist	Cultural Resources

Jason Jennings	Hydrologist	Water/Soils
Doug Byerly	Landscape Architect	Recreation
Anita Bailey	GIS Specialist	GIS
Leslie Smith	Other Resource Assistant	Recreation
Dan Herron	Forester	Special Uses
Dave Martin	South Zone FMO	Fire

Individuals from this Interdisciplinary team were utilized for the Travel analysis as needed. At critical points, Line Officers established sideboards, identified issues, and summarized management recommendations.

The Cherokee National Forest's Revised Land and Resource Management Plan (RLRMP) and amendments provide the management objectives, baseline information, and standards and guidelines to meet legal requirements. Additional information was obtained through field surveys, knowledge of forest personnel, and database queries. The analysis incorporates the best available scientific information as summarized in the document "Forest Service roads: a synthesis of scientific information" (USFS, 2001). This information was the foundation for determining impacts to different resources and identifying recommended management actions.

A Forest Wide Roads Analysis was completed in December 2002 (CNF RAP 2002). This analysis will tier to that document.

## Information Needs

The data currently housed in the geographic information system (GIS) will be the information used for this analysis. Updates will be made as new information becomes available. Extensive GIS maps are needed for the various resource fields and are discussed in Step 2 and displayed in Appendix A.

## Analysis Plan

Review of the document will occur on the Cherokee NF (Forest Service specialists); and, the report will be available for other Forests as well. Once finalized, the document will be available to the public if requested. It will be part of the administrative record for the Conasauga / Wildcat Ecosystem EA, for much of the information and many of the opportunities identified may be carried forward in the EA. The Conasauga / Wildcat Ecosystem Team conducted the analysis using GIS data, field data, and public involvement. The interdisciplinary (ID) team developed issues related to road management and reviewed all the questions in Step 4 to determine which were applicable to the analysis area. In Step 5 the team brought together all the resource information and made recommendations and set priorities.

## STEP 2 DESCRIBING THE SITUATION

### Purpose and Products

The purpose of this step is to:

- Describe the existing transportation system in relation to current forest plan direction.

The products of this step are:

- A map or other descriptions of the existing transportation and access system defined by the current forest plan or transportation plan, and
- Basic data needed to address travel analysis issues and questions.

## Existing Road and Access System Description

Most of the study area is on National Forest System land, and of the roads assessed in and near the boundary of this study area, most are National Forest System Roads (NFSRs) under the jurisdiction and maintenance of the Forest Service. There are approximately 88 miles of Forest Service jurisdiction roads within the analysis area. Many of the Forest Service roads (approximately 54 miles) are gated, vegetated, and closed seasonally or throughout the year. The remaining 34 miles of roads are open to public motor vehicle use. Most of the NFSRs are in fair to good condition, but all have annual routine maintenance needs. Deferred maintenance needs exist for just about all roads.

There are 1.54 miles of unauthorized roads.

There are approximately 28.5 miles of road under county jurisdiction and approximately 12.6 miles under state jurisdiction.

There are trails or areas for motor vehicle use in the analysis area.

## Land and Resource Management Plan Emphasis

The Conasauga-Wildcat Creeks Assessment Area covers approximately 38,488 acres.

Assessment Area	GIS Acres of FS Land	Pvt Acres	GIS Acres FS & Pvt	% FS Ownership
Conasauga Creek	11,491	15,469	26,960	43%
Wildcat Creek	8,884	2,644	11,528	77%
<b>Total Acres</b>	<b>20,396</b>	<b>18,113</b>	<b>38,488</b>	<b>53%</b>

Conasauga Watershed acres including area outside proclamation boundary:

Ownership	Acres	%
Forest Service	11,491	17%
Private	55,116	83%
<b>Total</b>	<b>66,607</b>	<b>100%</b>

This acreage is allocated into the following Management Prescriptions:

- 1.A** Wilderness (Bald River Gorge)
- 12.B** Remote Backcountry Nonmotorized (Portion of 12.B west of Bald River Wilderness )
- 5.A** Administrative Sites (??? sliver and a mislabeled stand?)
- 5.B** Electronic Sites (Waucheesi and Starr Mtn)
- 7.A** Scenic Byway Corridors (Mouth of Wildcat at Tellico River)
- 7.B** Scenic Corridors/Sensitive Viewsheds (West side of Starr Mountain)
- 8.B** Early Successional Habitat Emphasis (Tellico RD lands, Wildcat Watershed and area east of 315 in Conasauga Watershed)
- 9.H** Restoration (East side of Starr Mtn and west side of Waucheesi Mtn)
- 11** Riparian (acreage does not include intermittent)

<b>Management RX</b>	<b>Description</b>	<b>Total NFS Acres</b>	<b>Rx 11 Acres</b>	<b>Total W/O Rx 11 Acres</b>
<b>1.A</b>	Wilderness (Bald River Gorge)	<b>30</b>	<b>0</b>	<b>30</b>
<b>12.B (added 7.E.2)</b>	Remote Backcountry Nonmotorized (Portion of 12.B west of Bald River Wilderness )	<b>741</b>	<b>136</b>	<b>605</b>
<b>5.A???</b>	Administrative Sites	<b>137</b>	<b>1</b>	<b>136</b>
<b>5.B</b>	Electronic Sites	<b>.4</b>	<b>0</b>	<b>.4</b>
<b>7.A</b>	Scenic Byway Corridors (Mouth of Wildcat at Tellico River)	<b>99</b>	<b>48</b>	<b>51</b>
<b>7.B</b>	Scenic Corridors/Sensitive Viewsheds (West side of Starr Mountain)	<b>2728</b>	<b>309</b>	<b>2419</b>
<b>8.B</b>	Early Successional Habitat Emphasis (Tellico RD lands, Wildcat Watershed and area east of 315 in Conasauga Watershed)	<b>13448</b>	<b>2771</b>	<b>10,677</b>
<b>9.H</b>	Restoration (East side of Starr Mtn and west side of Waucheesi Mtn)	<b>3213</b>	<b>589</b>	<b>2,624</b>
<b>Total NFS Acres</b>		<b>20,396</b>	<b>3,854</b>	<b>16,542</b>



## **Road Definitions (36 CFR 212.1)**

As mentioned above, the Federal Register published the Final Rule and Administrative Policy January 12, 2001; this established new definitions for road management on the National Forests. Listed below are some of the new definitions for related to travel management and analysis.

**Area.** A discrete, specifically delineated space that is smaller, and in most cases much smaller, than a ranger district (36 CFR 212.1).

**Designated Road, Trail, or Area.** An NFS road, an NFS trail, or an area on NFS lands that is designated for motor vehicle use pursuant to 36 CFR 212.51 on an MVUM (36 CFR 212.1).

**Forest Road or Trail.** A road or trail wholly or partly within or adjacent to and serving the NFS that the Forest Service determines is necessary for the protection, administration, and utilization of the NFS and the use and development of its resources (36 CFR 212.1).

**Forest Transportation Atlas.** A display of the system of roads, trails, and airfields of an administrative unit (36 CFR 212.1).

**Forest Transportation Facility.** A forest road or trail or an airfield that is displayed in a forest transportation atlas, including bridges, culverts, parking lots, marine access facilities, safety devices, and other improvements appurtenant to the forest transportation system (36 CFR 212.1).

**Forest Transportation System.** The system of NFS roads, NFS trails, and airfields on NFS lands (36 CFR 212.1).

**Forest Transportation System Management.** Travel planning, analysis, designation of roads, trails and areas for motor vehicle use, recordkeeping, scheduling, construction, reconstruction, maintenance, decommissioning, and other operations undertaken to achieve environmentally sound, safe, and cost-effective access for the use, enjoyment, protection, administration, and management of NFS lands.

**Highway-Legal Vehicle.** Any motor vehicle that is licensed or certified under state law for general operation on all public roads in the state. Operators of highway-legal vehicles are subject to state traffic law, including requirements for operator licensing.

**Jurisdiction Over a Forest Transportation Facility.** The legal right to control or regulate use of a forest transportation facility derived from title, an easement, an agreement, or other similar source.

**Motor Vehicle.** Any vehicle which is self-propelled, other than:

- a. A vehicle operated on rails; and
- b. Any wheelchair or mobility device, including one that is battery-powered, that is designed solely for use by a mobility-impaired person for locomotion and that is suitable for use in an indoor pedestrian area (36 CFR 212.1).

**Motor Vehicle Use Map (MVUM).** A map reflecting designated roads, trails, and areas on an administrative unit or a ranger district of the NFS (36 CFR 212.1).

**National Forest System Road.** A forest road other than a road which has been authorized by a legally documented right-of-way held by a state, county, or local public road authority (36 CFR 212.1).

**National Forest System Trail.** A forest trail other than a trail which has been authorized by a legally documented right-of-way held by a state, county, or local public road authority (36 CFR 212.1).

**Non-Highway-Legal Vehicle.** Any motor vehicle that is not licensed or certified under state law for general operation on all public roads within the state. Operators of non-highway-legal vehicles are subject to state requirements, if any, for licensing and operation of the vehicle in question.

**Private Road.** A road under private ownership authorized by an easement granted to a private party or a road that provides access pursuant to a reserved or outstanding right.

**Public Road.** A road under the jurisdiction of and maintained by a public road authority and open to public travel (23 U.S.C. 101(a)).

**Road.** A motor vehicle route over 50 inches wide, unless identified and managed as a trail (36 CFR 212.1).

**Road Construction or Reconstruction.** Supervising, inspecting, actual building, and incurrence of all costs incidental to the construction or reconstruction of a road (36 CFR 212.1).

**Road Decommissioning.** Activities that result in restoration of unneeded roads to a more natural state (FSM 7734).

**Road Maintenance.** Ongoing upkeep of a road necessary to maintain or restore the road in accordance with its road management objectives (FSM 7714).

**Road Subject to the Highway Safety Act.** An NFS road that is open to public use in a standard passenger car, including a road with access restricted on a seasonal basis and a road closed during extreme weather conditions or for emergencies, but which is otherwise open to public travel.

**Route.** A road or trail.

**Temporary Road or Trail.** A road or trail necessary for emergency operations or authorized by contract, permit, lease, or other written authorization that is not a forest road or a forest trail and that is not included in a forest transportation atlas (36 CFR 212.1).

**Trail.** A route 50 inches or less in width or a route over 50 inches wide that is identified and managed as a trail (36 CFR 212.1).

**Unauthorized Road or Trail.** A road or trail that is not a forest road or trail or a temporary road or trail and that is not included in a forest transportation atlas (36 CFR 212.1).

## **Basic Data Needs**

Basic data needs are listed below for the Conasauga and Wildcat Creeks Travel Analysis; these were data needed to adequately address the issues. Some of the data are displayed in this report, and other data was used to help answer questions in Step 4, but are located on file at the Tellico Ranger District.

- GIS layer of existing transportation system.
- Road logs.
- GIS layer of wildlife cover types.
- GIS coverage and mapping of critical, unique or sensitive wildlife habitats.
- GIS map of potential unroaded areas (roads buffered ¼ mile).
- Classification of the transportation system by type and level of use, season of use and maintenance needs.
- Identification of illegal ORV use within the analysis area/garbage dumping sites.
- Mapping of wetlands, landforms, and ecological land types within the analysis area.
- Identification of wildlife species most at risk from roads, whose viability is a concern.
- On-Forest wildlife monitoring data.
- Identification of wildlife habitat management needs facilitated by the existing road system.
- Identification of existing monitoring/inventory sites and the required roads necessary for access.
- An assessment of the degree of encroachment and proximity of roads to wetland areas, and the potential impacts is needed.
- The location of the transportation system relative to riparian boundaries and the intersections that influence riparian vegetative communities.
- Vegetation inventory data.

## **STEP 3 IDENTIFYING ISSUES**

### **Purpose and Products**

The purpose of this step is to:

- Identify the key questions and issues affecting travel management, and
- Describe the origin of the issues.

The products of this step are:

- A summary of key travel-related issues, including their origin and basis, presented by general categories of environmental, socio-cultural and economic, and
- A description of the status of current data, including sources, availability, and methods of obtaining information.

## **Issue Summary**

The following were identified as issues, by the interdisciplinary team, for this travel analysis. Mention SABP if receive letter.

### **Issue 1 – Private Property/Special Use Access**

Private property access and special use permit access are issues in this analysis. They are factors in deciding the management of roads in all Management Prescriptions in the Conasauga/Wildcat Assessment Area. Roads they need for access are retained on the road system.

### **Issue 2 – Use of roads for wildfire suppression and prescribed burning.**

Existing system roads serve an important role in safe and efficient wildfire suppression operations. Timely access for suppression personnel and equipment is dependent upon an adequate road system.

Existing roads often serve as the primary control lines. This allows for suppression with minimal ground disturbance and minimal exposure of personnel to hazards. In addition to wildfire suppression, system roads serve as the primary containment sources for the Zone's Hazardous Fuels Reduction.

### **Issue 3 – Access for Vegetation Management**

Generally, the road network in the Conasauga/Wildcat Assessment Area was designed and built to facilitate vegetation management. Access is generally good, but small amounts of roading may be needed for future management.

### **Issue 4 – Access/Use for Wildlife Management**

The presence of roads, especially roads open to public traffic, can have adverse effects on wildlife. Many adverse impacts are the result of disturbance, illegal harvest, and habitat alterations caused by roads. Controlling access, by gating roads, is an important tool for mitigating adverse impacts. Gated roads also provide benefits for wildlife when these areas are managed as linear wildlife openings or provide access to spot openings. Roads also facilitate and provide access for hunting and wildlife viewing opportunities. Maintaining un-roaded areas is crucial in order to provide wildlife with large contiguous blocks of un-fragmented habitat with low levels of disturbance. Controlling access, providing wildlife openings, and maintaining un-roaded areas were identified as important road issues for wildlife in the Conasauga/Wildcat Assessment Area.

### **Issue 5 – Recreation/Heritage Use**

Roads are important factor from a recreational standpoint for numerous reasons. They serve as the primary conduit for ingress/egress to the National Forest and the recreation zones.

Recreation activities in the Conasauga/Wildcat Assessment Area include: horseback riding, fishing, hiking, camping, swimming, hunting, scenic driving, and many others. All of these recreational activities require a road system to access the recreation zones. Additionally from an administrative standpoint, roads are a necessity for emergency response and maintenance of recreational zones and campgrounds.

Historic Routes - Roads have historically been a valued and integral part of the Conasauga & Wildcat Creeks Watershed. The Warriors Passage National Recreation Trail overlays part of an historic route used by British soldiers and Cherokee Indians during the 18<sup>th</sup> and 19<sup>th</sup> centuries. This route and nearby segments of the Unicoi Turnpike, a road that has existed more than a thousand years, are now included within national forest boundaries and managed by the Forest Service. These historic travel routes should be managed as a network of non-motorized trails to improve opportunities for public recreation and education. Visitors could experience and learn how people historically traveled through this area, who they were and why they were traveling. It would also create an overnight trail opportunity outside of designated Wilderness.

Equestrian Use - System roads and undesignated routes in the Starr Mountain area have become popular for equestrian use. This area has been identified as one of four areas within the Cherokee National Forest to develop and improve a network of equestrian trails. A horse camp was recently constructed at Lost Corral located conveniently off US Highway 411. However, direct trail access to Starr Mountain from the horse camp/trailhead is limited by private land holdings and steep grades. Road and trail management in the future should strive to provide multiple day-ride opportunities and minimize equestrian use on open roads. Seek opportunities to acquire land or right-of-ways for additional direct trail access and the development of the desired looped trail network..

## Status of Current Data

The roads in the analysis area are in the GIS system, and their condition/status is current as of the January 2009. The road number, name, length, and other data are detailed in **Table 1** below.

**Table1. Conasauga-Wildcat Watershed Assessment Area Roads - Current Condition (November 2011)**

ROAD #	ROAD NAME	Mileage in Watershed	Miles of road within 100' of stream	Status (as defined by Travel Management Rule)	RMO	SURFACE TYPE	REMARKS
<b>NATIONAL FOREST SYSTEM ROADS (NFSR)</b>							
11011	HIWASSEE LAND	4.87	0.27	Closed	D2-FS-TR	AGG	FS does not have a R/W on portion of road that crosses private land; accesses pvt land (in-holding); used as a horse trail; thru road
11012	HIWASSEE LOWER SLOPE	1.95	0.08	Closed	D2-FS-TR	AGG	FS does not have a R/W on portion of road that crosses private land at the intersection with #11011; FS has R/W on North end near TN Dept. of Forestry building; Accesses pvt land on South end; used as a horse trail; thru road
11013	HIWASSEE LAND EASEMENT	0.24	0.00	Closed	D2-FS	NAT	Accesses pvt land; Has locked private gate
11014	HIWASSEE LAND INHOLDING	0.36	0.04	Closed	D2-FS	NAT	Accesses pvt land; property owner is using unauthorized road CW-6 for access
11082	WEBB BRANCH	0.90	0.00	Open	C3	AGG	Jurisdiction: pvt
11082	WEBB BRANCH	0.30	0.23	Closed	C3	AGG	Accesses pvt land
11091	S. PINE MT	0.62	0.00	Closed	D2-HC	IMP	Accesses pvt land
11092	N. PINE MT.	1.84	0.00	Closed	D2-HC	IMP	Accesses pvt land
11111	ALVIN BR. RIDGE	0.52	0.00	Open	D2-HC	NAT	Accesses pvt land
11111	ALVIN BR. RIDGE	0.01	0.00	Closed	D1	AGG/IMP	
11112	UPPER CONASAUGA	0.62	0.00	Open	D2-HC	AGG/IMP	Accesses pvt land
11112	UPPER CONASAUGA	0.02	0.00	Closed	D1	NAT	
1131	COKER CR.	0.52	0.00	Closed	D2-FS	AGG/IMP	STREAM CROSSING: Coker Cr.
126	BALD RIVER	2.69	0.19	Open	C3	AGG	Accesses special use site
126A	BALD RIVER ORV	0.20	0.20	Open	D2-HC	NAT	Accesses pvt land; Updated INFRA
126A	BALD RIVER ORV	0.31	0.31	Closed	D2-FS	NAT	Updated INFRA
126C	WAUCHEESI MT	1.55	1.55	Open	D2-HC	IMP	Accesses special use site
2002	HATTER BR.	4.56	0.25	Closed	D2-FS	IMP	STREAM CROSSINGS; thru road
2002A	HATTER BR. SPUR	0.63	0.00	Closed	D2-FS	IMP	
2002B	LOWER HATTER BR.	0.28	0.00	Closed	D1	NAT	
2014	FOX KNOB	1.23	0.08	Closed	D1	IMP	
2017	MECCA SPUR	0.73	0.27	Closed	D2-FS	IMP	Accesses pvt land
2104	BORIN TOP-KINGDOM	1.08	0.00	Closed	D2-FS	NAT	
2104A	BORIN TOP-KINGDOM SPUR	0.28	0.00	Closed	D2-FS	IMP	
2109	CATASKA MT.	5.46	0.13	Closed	D2-FS	NAT	
2109A	FERN BR.	1.98	0.14	Closed	D1	IMP	STREAM CROSSING: Fern Br.

Table1. Conasauga-Wildcat Watershed Assessment Area Roads - Current Condition (November 2011)

ROAD #	ROAD NAME	Mileage in Watershed	Miles of road within 100' of stream	Status (as defined by Travel Management Rule)	RMO	SURFACE TYPE	REMARKS
2111	HOOPER BR.	0.13	0.00	Open	C3	AGG	Accesses pvt land; Updated INFRA
2111	HOOPER BR.	1.20	0.04	Closed	D1	NAT	Updated INFRA
2112	GRINDSTONE RIDGE	0.92	0.06	Closed	D2-FS	AGG	
220	WHITE CLIFF	1.44	0.00	Open	C3	AGG	Accesses trailhead & pvt land
220C	WHITE CLIFF SPUR C	0.32	0.00	Closed	D2-FS	NAT	
297	STARR MT	3.30	0.04	Open	C3	AGG	Accesses trails & pvt land
297	STARR MT	2.75	0.04	Closed	D1	NAT	used as a horse trail
297A	STARR MT EXT.	0.96	0.00	Closed	D2-FS	NAT	
297F	STARR MT LOOKOUT	0.24	0.00	Open	D2-FS	IMP	Special use: TN Dept. of Forestry
341	CONASAUGA CR.	6.13	0.70	Open	C3	AGG	MULTIPLE FORDS; accesses trailhead & pvt land; thru road
341A	CONASAUGA SPUR A	0.83	0.00	Open	C3	AGG	Accesses trailhead
341B	CONASAUGA SPUR B	1.35	0.00	Closed	D2-FS	NAT	
341C	CONASAUGA SPUR C	0.49	0.04	Closed	D2-FS	NAT	
341F	CONASAUGA SPUR F	0.33	0.02	Closed	D2-FS	IMP	
341H	CONASAUGA SPUR H	0.98	0.00	Closed	D2-FS	IMP	
341J	MCNABB EASEMENT	0.34	0.31	Closed	D2-HC	NAT	Accesses pvt land
341K	CONASAUGA SPUR K	0.37	0.00	Closed	D2-FS	IMP	
3410	HOG BR.	1.22	0.00	Closed	D2-FS	AGG	
384	WILDCAT CR.	4.79	0.23	Open	C3	AGG	STREAM CROSSINGS: Natty Cr. & Tobe Cr.; thru road; Accesses pvt land
384C	MILLER CEMETERY	1.31	0.00	Open	C3	AGG	Accesses pvt land
384D	WILDCAT SPUR	1.36	0.04	Closed	D1	NAT	
40641	NATTY CR SPUR	0.66	0.05	Closed	D2-FS	NAT	
40661	E. FORK LYONS CR	1.49	0.00	Closed	D2-FS	IMP	Accesses pvt land
40681	BIG RIDGE	2.28	0.05	Closed	D2-FS	IMP	STREAM CROSSING: Fall Br.
40682	STILLHOUSE CR	2.58	0.00	Closed	D2-FS	IMP	
40683	BIG RIDGE SPUR	0.24	0.00	Closed	D2-FS	IMP	
40781	HEAD LYONS CR	0.50	0.00	Closed	D2-HC	IMP	Accesses pvt land
443301	PAYNE RIDGE	0.91	0.00	Open	C3	AGG	aka Witt Rd; accesses pvt land
443301	PAYNE RIDGE	0.90	0.00	Closed	D2-FS	IMP	
443302	PAYNE RIDGE SPUR	1.03	0.00	Closed	D2-FS	IMP	
5012	HOLDER	1.29	0.49	Open	C3	IMP	Accesses pvt land
5013	MURR BR	2.23	0.18	Closed	D2-HC	AGG	Accesses pvt land; STREAM CROSSING:Murr Br.



**Table1. Conasauga-Wildcat Watershed Assessment Area Roads - Current Condition (November 2011)**

ROAD #	ROAD NAME	Mileage in Watershed	Miles of road within 100' of stream	Status (as defined by Travel Management Rule)	RMO	SURFACE TYPE	REMARKS
5013A	MURR BR SPUR A	0.22	0.12	Closed	D2-HC	IMP	Accesses pvt land; STREAM CROSSING:Murr Br.
76	LYONS CR (OLD FURNACE)	6.77	0.00	Open	C3	AGG	Accesses pvt land
76B	LYONS CR SPUR B	0.62	0.00	Closed	D2-FS	IMP	
76C	LYONS CR SPUR C (HOLDER)	0.71	0.11	Open	D2-HC	NAT	Accesses pvt land
76C	LYONS CR SPUR C (HOLDER)	0.53	0.11	Closed	D2-HC	NAT	Accesses pvt land
76D	DON CHAREST R/W	0.28	0.00	Closed	D2-HC	AGG	Accesses pvt land
76E	FRERICHS EASEMENT	0.55	0.00	Closed	D2-HC	AGG	Accesses pvt land
76F	ARTHUR APICELLA EASEMENT	0.03	0.00	Closed	D2-HC	NAT	Accesses pvt land

<b>TOTALS OPEN SYSTEM ROADS</b>	<b>34.33</b>	<b>3.51</b>
<b>TOTALS CLOSED SYSTEM ROADS</b>	<b>54.00</b>	<b>2.86</b>
<b>TOTALS ALL SYSTEM ROADS</b>	<b>88.33</b>	<b>6.37</b>

**UNAUTHORIZED ROADS:**

CW-1	Unauthorized road at 2104A	0.73	0.00				connects #2104A & #2109
CW-2	Unauthorized road at 443302 & Payne ridge private road	0.25	0.00				
CW-3	Unauthorized road at 40781	0.21	0.00				Property owner has been using this road to access pvt land, but there is access across pvt
CW-4	Unauthorized road off of 76C	0.23	0.00				
CW-5	Unauthorized road off of 76C	0.12	0.00				
CW-6	Unauthorized road off of #11011	0.16	0.00				Accesses pvt land; property owner uses this road for access in lieu of #11014

<b>TOTALS FOR UNAUTHORIZED ROADS</b>	<b>1.70</b>	<b>0.00</b>
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**COUNTY ROADS:**

CH163		0.07	0.00				
CH603		2.74	0.50				
CH604		0.49	0.00				
CH607		1.05	0.17				
CH610		0.66	0.04				
CH616		0.21	0.00				
CH617		2.09	0.12				

**Table1. Conasauga-Wildcat Watershed Assessment Area Roads - Current Condition (November 2011)**

ROAD #	ROAD NAME	Mileage in Watershed	Miles of road within 100' of stream	Status (as defined by Travel Management Rule)	RMO	SURFACE TYPE	REMARKS
CH623		3.00	0.36				
CH632		0.22	0.00				
CH633		0.71	0.00				
CH640		1.32	0.04				
CH640-1		0.64	0.00				
CH642		1.43	0.09				
CH648		0.66	0.00				
CH650		0.82	0.04				
CH651		3.60	0.43				
CH652		2.58	0.98				
CH665		5.64	0.49				
CH671		0.58	0.00				

**TOTAL COUNTY ROADS      28.51      3.26**

**STATE ROADS:**

TN310		1.88					
TN315		3.22					
TN39-1		3.12					
TN68-1		4.36					

**TOTAL STATE ROADS      12.58      0.00**

**TOTAL ALL ROADS      135.48      9.63**

## **STEP 4 ASSESSING BENEFITS, PROBLEMS, AND RISK**

### **Purpose and Products**

The purpose of this step is to:

- Assess the various benefits, problems, and risks of the current transportation system and whether the objectives of Forest Service policy and forest plans are being met.

The products of this step are:

- A synthesis of the benefits, problems, and risks of the current transportation system,
- An assessment of the risks and benefits of entering any unroaded areas, and
- An assessment of the ability of the transportation system to meet management objectives.

### **Current Transportations System Benefits, Problems, and Risks**

The following section is a series of questions and answers that assess benefits, problems, and risks of the current transportation system and its ability to meet the objectives stated in the Forest Land Management Plan. The questions are from Forest Service publication FS-643, *Road Analysis: Informing Decisions About Managing the National Forest Transportation System*.

Although the questions specifically address the road system, in answering the questions, the transportation system was considered.

#### **Ecosystem Functions and Processes (EF)**

***EF (1): What ecological attributes, particularly those unique to the region, would be affected by roading of currently unroaded areas?***

Very little to none of the Conasauga and Wildcat Creek watersheds could be considered to be in an unroaded condition. The south eastern portion of Wildcat Creek watershed does contain some areas allocated to management prescription 12B (Remote Backcountry Recreation – Nonmotorized), but there are no ecological attributes that are unique to this area when compared to other similar areas on the Forest. Effects of additional roading in this area would be similar to effects described in the forest-wide RAP.

***EF (2): To what degree do the presence, type, and location of roads increase the introduction and spread of exotic plant and animal species, insects, diseases, and parasites? What are the potential effects of such introductions to plant and animal species and ecosystem function in the area?***

Roads are known vectors for the spread of exotic species. Effects are the same across the forest.

***EF (3): To what degree do the presence, type, and location of roads contribute to the control of insects, diseases, and parasites?***

Effects are the same across the forest.

***EF (4): How does the road system affect ecological disturbance regimes in the area?***

The Conasauga and Wildcat Creek watersheds are highly fragmented and interspersed with private lands. Natural ecological disturbance regimes would only operate on a very local (stand sized) level. While the existing road system may provide corridors for the movement of some animals and plant species, it also has the potential to limit the movement of other species. The lower concentration of roads in the south eastern portion of the Wildcat Creek watershed likely reduces the amount of human disturbance in that area as compared to the rest of the watershed. Natural disturbance regimes are likely more influential in this portion of the watershed.

***EF (5): What are the adverse effects of noise caused by developing, using, and maintaining roads?***

The Conasauga and Wildcat Creek watersheds are interspersed with private land and roads are somewhat more prevalent. Noise effects from roads are similar to what is found across the forest. Noise can affect some species and in other species have no effect. It initially may cause avoidance of an area by some species. Most of those species rapidly become habituated.

**Aquatic, Riparian Zone, and Water Quality (AQ)**

***AQ (1): How and where does the road system modify the surface and subsurface hydrology of the area?***

In general, precipitation is intercepted by the road surface and cutbanks. Surface and subsurface flows are also intercepted by the road when water is moving down adjacent hillslopes. Water can be concentrated either on the road surface or in adjacent ditches, and in places, is rerouted from pathways it would otherwise take if the road were not present. By intercepting surface and subsurface water flow, and diverting it into ditches and channels, roads effectively increase the density of streams on the landscape. As a result, water infiltration decreases, the timing of flood flows is quickened, and the peak of flood flows is increased. The magnitude of this effect is dependent on the density of roads, gradient of road, and its location in the watershed. Most roads within the analysis area are basically ridge-top/upper side-slope road locations with reduced connectivity to surface and subsurface water. The majority of these roads are outsloped with dips and culverts providing drainage or insloped with ditches and cross drains providing water drainage.

**Recommendation** – Surface drainage can be improved by additional aggregate surfacing, additional drainage dips, cross drain culverts, berms and outsloping. Wing ditches and/or turnouts should disperse water across an undisturbed soil surface. Ditch lines should not lead directly into streams. These mitigation measures can reduce the impacts associated with the roads, including effects to surface and subsurface hydrology and erosion/sediment rates.

***AQ (2): How and where does the road system generate surface erosion?***

By their nature, all native and aggregate surfaced roads will generate some surface erosion. The amount depends on factors such as soil type, road surface type, road gradient, road prism, the spacing and effectiveness of drainage structures, traffic use, and maintenance activity. The extent of surface erosion occurring on road cutbanks depends on the steepness, slope length, soil type, and vegetative cover. Road ditches concentrate water flow which generates surface erosion and also increase sediment delivery to streams from road surfaces and road cutbanks. Ditches

and culverts that are blocked create surface erosion issues by diverting water flow onto road surfaces. Forest Service roads that are closed to all but administrative traffic are generally vegetated with a grass-wildlife mixture and serve as linear wildlife openings. As a result, surface erosion is minimized from these roads. Roads open to public use provide a continual opportunity for surface erosion, but effective mitigation described in AQ1 will limit surface erosion. Any road opened and used for commercial use (such as logging traffic), would result in an increased potential for surface erosion, but reconstruction or maintenance activities associated with this kind of use would mitigate erosion during use and result in a road with less erosion potential after its use. Surface erosion would also be a concern on any newly constructed permanent or temporary road until the road is closed and re-vegetated or otherwise stabilized with mitigation measures.

There is evidence of minor surface erosion occurring on all the roads that were visited. Evidence of erosion was found on road cutbanks, in ditches, and in stream channels. An excessive amount of erosion is occurring along FSR 341.

**Recommendations-** Increase graveling and improve drainage structures for the section of road 341 adjacent the creek. Harden fords and stream banks adjacent to the fords or add bridges to cross Conasauga Creek.

***AQ (3): How and where does the road system affect mass wasting?***

There were no active mass wasting sites observed within the analysis area.

Small slides and slumps are possible below culvert outfalls, along fill slopes where road drainage is concentrated, and on road cutbanks. Inadequate sized culverts or plugged culverts may blowout during high flow periods and initiate soil slides. Proper sizing and location of drainage culverts can reduce this potential, as well as, armoring the outfall areas associated with drainage structures, as needed. Road cutbanks propose a problem in steep areas where soils are coarse in texture, shallow, and where unstable colluvium material occurs.

***AQ (4): How and where do road-stream crossings influence local stream channels and water quality?***

Road-stream crossings serve as a primary conduit for road-related erosion and storm drainage to reach streams. Accelerated sediment delivery to affected streams occurs at these points, and can affect water quality and substrate condition. In most cases culverts have more of an influence on stream channels and water quality than do bridges or bottomless culverts. Culverts concentrate and accelerate water flow causing soil displacement to occur at the outfalls and cause stream banks to undercut. Over time the stream channel adjusts to the change in flow by becoming deeper and/or wider for a short distance below the culvert. Piping occurring under or around culverts is usually a minor source of sediment; however, high sediment loading can occur from a culvert blowout due to piping. Blowouts can also occur from plugged culverts. Road surfacing, eroded materials and pollutants are usually deposited into streams by ditches that empty directly into streams at road-stream crossings.

There are an unestimated number of ephemeral and intermittent drainage crossings within the analysis area. There are multiple fords crossings on Conasauga Creek at the fords compaction, rutting, and erosion occurring from use.

**Recommendations-** Create ditch turnouts so that ditch lines do not empty directly into stream channel, repair or replace culverts that are not functioning properly. Increase graveling and improve drainage structures for the section of road 341 adjacent the creek. Harden fords and stream banks adjacent to the fords or add bridges to cross Conasauga Creek.

***AQ (5): How and where does the road system create potential for pollutants, such as chemical spills, oils, deicing salts, or herbicides, to enter surface waters?***

Due to the nature and location of the roads within this analysis area, there is little potential for chemical pollution of streams related to Forest Service roads. If roads were used to transport chemicals such as herbicide, the greatest potential for spills affecting aquatic resources would be at stream crossings or road segments located adjacent to streams. TN 310, 315, 411, 39, and 68 create the greatest potential for pollutants to enter the Tellico River. These roads are more traveled by vehicles that may be carrying a variety of chemicals, oil, fuel, and raw sewage are potential water pollutants. Due to there impervious nature paved roads have the potential to deliver more pollutants such as oils and deicing salts. Most of the roads in this analysis area are located on ridgetops or upper/middle sideslope locations. Where these roads cross streams, there would be some potential for chemical pollution should a chemical spill occur. Tennessee State Highway 310, 315, 411, 39, and 68 also creates potential for pollutants from chemical spills and deicing salts to enter surface waters in the Watershed.

***AQ (6): How and where is the road system "hydrologically connected" to the stream system? How do the connections affect water quality and quantity?***

The road system in the analysis area is connected to streams primarily at stream crossings. Generally, the hydrologic connection is made where ditchlines empty into streams or drainages. Road surfacing and other eroded materials are usually deposited into streams by ditches that empty directly into streams. Without proper ditch turnouts, surface runoff enters the stream channel carrying eroded materials and pollutants. If this water moves directly to stream channels, peakflows and hydrograph timing can be somewhat altered from the condition associated with an unroaded watershed. The majority of road mileage within this analysis area is located along ridge-tops or upper/middle side-slopes. However, stream crossings can also be problematic with these roads. Hydrologic connectivity is generally reduced when roads are properly located.

See AQ (4) about crossing where ditch lines empty directly into streams.

**Recommendations- -** Create ditch turnouts so that ditchlines do not empty directly into stream channel. Determine roads where ditchlines may be eliminated and other types of water control structures such as coweeta dips may be use.

***AQ (7): What downstream beneficial uses of water exist in the area? What changes in uses and demand are expected over time? How are they affected or put at risk by road-derived pollutants?***

Conasauga Creek is on the state of TN 303d list. 34 miles of stream in McMinn and Monroe counties. Loss of biological integrity due to siltation from pasture grazing. Another pollutant source includes discharges from MS4 area. EPA has approved a pathogen TMDL that address known pollutants. Roads add to some sediment but are not a major source compared to private land management practices near Conasauga Creek.

***AQ (8): How and where does the road system affect wetlands?***

Road systems may affect wetland hydrology by altering surface and subsurface drainage patterns. This change has the potential to modify the wetland moisture regime. Roads crossing at wetlands may restrict natural water flow quantity, timing, and routing. There are no known wetland areas within the analysis area.

***AQ (9): How does the road system alter physical channel dynamics, including isolation of floodplains, constraints on channel migration, and the movement of large wood, fine organic matter, and sediment?***

The road system can alter physical channel dynamics by increasing runoff and sediment delivery to affected streams. Sediment entering streams can reduce pool depths and contribute to changes in channel substrate (i.e. embeddedness). Stream crossings can retard or prohibit the movement of large woody debris, fine organic matter, and sediment. Refer to AQ (4) for stream crossings.

**Recommendation** – Determine road crossings where culverts could be replaced by bridges or bottomless culverts.

***AQ(10): How and where does the road system restrict the migration and movement of aquatic organisms? What aquatic species (i.e. fish and amphibians) are affected and to what extent?***

Restrictions to migration for aquatic species primarily occur at stream crossings. There are 25 perennial stream crossings along the road system in this project area; 1 is a bridge, 17 are culverts, and 7 are fords. Most of the culverts are potential barriers to fish, amphibians, or macroinvertebrates; All, but one, of these are administered by the Forest.

Ten of twenty-three stream reaches capable of supporting fish in the analysis area have been surveyed. The unsurveyed stream reaches could contain new species including the Sensitive – Tennessee dace. The reaches should be surveyed.

Thirty species of fish have been documented in the surveyed streams; no threatened, endangered, sensitive or locally rare species have been collected.

**Recommendation** – Electrofish the unsurveyed streams.

***AQ(11): How does the road system affect shading, litterfall, and riparian plant communities?***

Of the 133.8 miles of roads in this project area, 27.6 (21%) are within the riparian corridor; most of these miles are administered by the Forest Service. Shading, litterfall and riparian plant communities are not significantly impacted by these roads because the canopy remains closed and the amount of permanently altered habitat is minor.

**Recommendation** – Sustain trees along riparian corridors. Decommission unnecessary roads 2002, 11011, 11012, 40661 and 384D.

***AQ(12): How and where does the road system contribute to fishing, poaching, or direct habitat loss for at-risk species?***

Fishing and poaching could occur for the bluegill, green sunfish, redbreast sunfish, rock bass, smallmouth bass, spotted bass, brown trout, and rainbow trout in this analysis area. Direct habitat loss from the road system is unlikely because the riparian corridor will be protected.

**Recommendation** – Protect the riparian corridor.

***AQ(13): How and where does the road system facilitate the introduction of non-native aquatic species?***

Not uniquely relevant to this analysis area – see Forest Wide discussion

**Recommendation** – None

***AQ(14): To what extent does the road system overlap with areas of exceptionally high aquatic diversity or productivity or areas containing rare or unique aquatic species or species of interest?***

Lyons Creek supports 23 species of fish and Wildcat Creek supports 20 species. These numbers represent exceptionally high aquatic diversity. Only one bridge spans Lyons Creek and none crosses Wildcat Creek; no roads are with the riparian corridors of these streams.

**Recommendation** – None

**Terrestrial Wildlife (TW)**

***TW (1): What are the direct effects of the road system on terrestrial species habitat?*** Effects are dependent upon the type of road and amount of traffic. Roads can be barriers to movement and dispersal of species including small mammals, amphibians and reptiles. Roads can also provide dispersal corridors for larger mammals. Vegetation along roads can provide nesting areas and forage. Effects are the same across the forest.

***TW (2): How does the road system facilitate human activities that affect habitat?*** Roads provide access to forest products the removal of which may or may not affect habitat. Effects are the same across the forest.



***TW (3): How does the road system affect legal and illegal human activities (including trapping, hunting, poaching, harassment, road kill, or illegal kill levels)? What are the effects on wildlife species?*** Roads provide access for both legal and illegal removal of wildlife. Harassment, whether intentional or unintentional, of species during breeding or nesting can affect species in the localized area. Effects are the same across the forest.

***TW (4): How does the road system directly affect unique communities or special features in the area?*** There are no known unique communities or special features in this area.

## **Economics (EC)**

***EC (1): How does the road system affect the agency's direct costs and revenues? What, if any, changes in the road system will increase net revenue to the agency by reducing cost, increasing revenue, or both?***

See table 3 for the average maintenance costs for each road.

## **COSTS/REVENUES**

**Direct costs** to the agency include road maintenance costs due to motor vehicle use and any needed restoration or protection costs to stabilize roads near resources such as streams.

Road maintenance costs fit into two categories:

- **Annual Maintenance.** Work performed to maintain serviceability, or repair failures during the year in which they occur. Includes preventive and/or cyclic maintenance performed in the year in which it is scheduled to occur. Unscheduled or catastrophic failures of components or assets may need to be repaired as a part of annual maintenance.

This amount will vary depending on the road's operational maintenance level which is the maintenance level currently assigned to a road considering today's needs, road condition, budget constraints, and environmental concerns. It defines the level to which the road is currently being maintained.

- **Deferred Maintenance.** Maintenance that was not performed when it should have been or when it was scheduled and which, therefore, was put off or delayed for a future period. When allowed to accumulate without limits or consideration of useful life, deferred maintenance leads to deterioration of performance, increased costs to repair, and decrease in asset value. Deferred maintenance needs may be categorized as critical or noncritical at any point in time. Continued deferral of noncritical maintenance will normally result in an increase in critical deferred maintenance.

A critical need is a requirement that addresses a serious threat to public health or safety, a natural resource, or the ability to carry out the mission of the organization.

The objective maintenance level is the maintenance level to be assigned at a future date considering future road management objectives, traffic needs, budget constraints, and environmental concerns. The objective maintenance level may be the same as, or higher or lower than, the operational maintenance level.

The operational maintenance level is the maintenance level currently assigned to a road considering today's needs, road condition, budget constraints, and environmental concerns. It defines the level to which the road is currently being maintained.

Expenditures have decreased due to decreased funding. It is hard to predict future funding, but the trend in recent years is a decrease in road maintenance funding.

The need to provide forest visitors with safe and environmentally friendly roads seems to have become an important issue to many legislators. This concern may reverse the recent downward trend.

When funding is below the amount needed, priorities are set concerning which roads will have which maintenance activities (grading, brushing, gravel, etc.) performed.

All the maintenance level 3 roads in the area are graded twice a year and mowed once every two years.

Consideration is given to changing the objective maintenance level if a reduction in funds continues, e.g. maintenance level 3 (suitable for passenger car) is changed to maintenance level 2 (high clearance vehicles). Also, funds other than those specifically designated for road maintenance (CMRD) are often available for road maintenance. These include K-V Trust Fund - Special Legislation (CWK2), Legacy Roads and Trails (CMLG), Vegetation Management (NFVW), Wildlife Management (NFWF), Recreation Fee Revenue Program (FDFD), road maintenance deposits from timber purchasers, road permits that require the user to perform maintenance, and road legacy funds.

The road system provides for potential revenues to the agency in the following ways:

- Timber sales
- Recreation use fees
- Fees for special use and road use permits:
  - Access to timber on private land

Presently, direct costs exceed direct revenues, but many resource management targets could not be met or would cost more to accomplish without the current road system, so reducing the number of roads and/or reducing the amount of maintenance on roads could result in a net decrease in revenue. For example, roads that provide access to areas for prescribed burns which are needed to reduce hazardous fuels.

## **CHANGES**

Changes to the road system that could increase net revenue:

- Manage the suitable timber base that can be accessed by existing roads and/or new roads that are low cost and would not harm resources. Any new system roads would likely have an objective maintenance level of 1 or 2 which reduce the long-term funding needs. New roads would be built to reduce annual maintenance costs. This would be done by the construction features including broad-based dips and the stabilization of the roadbed with gravel or vegetation. Some of the costs associated with this include planning, design, and contract administration. The forest would collect road maintenance deposits from the purchasers and/or the purchaser would perform the necessary maintenance on roads not open to the public. It could also provide an opportunity to perform deferred maintenance work on roads open to the public if the work is also needed to accommodate log trucks. Such work would be done so that long-term impacts of a road to adjacent resources are reduced.
- Close roads to motor vehicle use by the public. This could require the following costs: planning, enforcement, and mitigating unacceptable environmental effects such as sedimentation from roads adjacent to streams. Possible consequences of closure: decreases in revenues from commodities such as timber (if road is no longer used to access timber), recreation fees, and other services such as special-use permits. Reduced maintenance costs and reductions in costs to mitigate unacceptable environmental effects would likely increase in net revenues. Some roads were built prior to FS ownership and were considered “public” access with an established historical use. Changes that prevent the public from using roads that they feel they have a “right” to use could increase costs to the agency due to the need for enforcement of the closure and an increase in the amount of time spent responding to complaints.
- Decommissioning is the demolition, dismantling, removal, obliteration and/or disposal of a deteriorated or otherwise unneeded road, including necessary cleanup work. Decommissioning would be done so that the road no longer needs maintenance. Costs include planning, monitoring, repairing or mitigating any unacceptable impacts to resources, and the actual decommissioning work. Possible consequences include decreases in revenues from commodities such as timber, recreation fees, and other services such as special-use permits. This work would reduce maintenance costs and reduce costs to mitigate any unacceptable impacts to resources. This work could make some areas harder to access for resource management which could increase costs.
- Encourage individuals who use Forest Service roads to access private land to form homeowner associations and/or to approach the county road department to maintain those roads. This would reduce the agency’s road maintenance costs.
- Maintain some or all of the maintenance level 3 or 4 roads as maintenance level 2 roads. There are no maintenance level 4 roads in this area. The maintenance level 3 roads in this area are:
  - Webb Br., #11082
  - Starr Mtn, #297
  - Hooper Br., #2111
  - Conasauga, #341
  - Conasauga Spur A, #341A
  - Wildcat, #384

- Miller Cemetery, #384C
- Payne Ridge, #443301
- Holder, #5012
- Lyons Cr. (Old Furnance), #76

***EC (2): How does the road system affect priced and non-priced consequences included in economic efficiency analysis used to assess net benefits to society?***

The management of the road system involves decisions to build new roads, reconstruct roads, perform maintenance on some roads and not others, decommission roads, or temporarily close them if they are no longer needed or are causing resource damage.

Construction of new roads, although improving access to the area (a benefit to some), may diminish the desired natural and remote character associated with the area and would reduce its passive use value to some visitors.

Passive use values include features society values simply because they exist without actually using them or they expect them to be preserved for others to use and enjoy (a scenic landscape, wilderness, or an endangered plant or animal). They are also features valued for preservation (cultural resources and historic sites).

Decommissioning, closing, or changing the maintenance level of roads may be necessary to meet budget and funding constraints or to prevent resource damage, but may diminish access to areas that are important to certain users of forest resources. People with a strong attachment to a place, activity, or road may consider it a loss in value unless they are willing and able to find, and adapt, to substitute experiences.

The road users that contribute the most significant economic benefits are those who visit the area for recreation-related activities such as:

**Driving for pleasure:**

Roads #297, #220, #76, #341, #384, #384C, #126, and #126C are part of a network of roads that is very popular with sightseers.

**Camping:**

Roads #341 and #297 provide access to several dispersed camping areas.

**Hunting:**

The open roads provide access and closed roads make game retrieval easier.

**Fishing: Wildcat Creek Road (#384), Bald River Road (#126)**

**Hiking:**

Roads #297, #341, #341A, #76, #384, #126, #126C, and #384C provide access to trails, #119, #120, #121, #124, #170, #164, and #136 and foot travel is permitted on many roads closed to the public for motor vehicle use.

Wildlife viewing:

The open roads are used by visitors for this activity.

Hiking in wilderness areas:

Roads #384 and #126 provide access to trails in the Bald River Gorge Wilderness.

Visiting historical sites/areas:

Lyons Creek Road (#76) off the Cherohala Skyway (TN 165), Wildcat Creek Road (#384), Bald River Road (#126) and Waucheesi Mountain Road (#126C) all provide access to the Warriors Passage National Recreation Trail and/or future connected trail network with Unicoi Turnpike.

Other:

These roads are used by Fort Loudoun Electric Cooperative to access power lines: #384, #126, and #126C

These roads provide access to private property: #76, #384, #126, #341, #297, #220, #11082, #11111, #11112, #2111, #384C, #5012, #76C, #126A, #443301, #11011, #11012, #11013, #11014, #11082, #11091, #11092, #2017, #341J, #40661, #40781, #5013, #5013A, #76C, #76D, #76E, and #76F

Roads #384 and #384C are used to access Miller Cemetery.

Portions of roads #384, #341, #5012, and #5013A are in riparian areas which could be considered a net cost to society because of the roads impact on water quality.

Based on the activities that the road system accommodates, the following consequences are realized:

Priced:

- Sale of commodities such as timber (on Forest Service and private land)
- Less cost due to convenient access for research, inventory, and monitoring
- Road development and maintenance
- Liability
- Maintenance of trails and recreation-related sites
- Fire suppression
- Resource management
- Control of invasive species
- Mitigation of resource damage from roads

Non-priced:

- Resource protection such as fire suppression, wildlife and watershed management to preserve the “passive” value that the public assigns to natural resources.
- Access to public land and its resources
- Noise and air pollution

- Water quality
- Fish habitat
- Effect of road density on wildlife
- Litter

Typically, the transportation system increases the value of both priced and non-priced commodities, because without access these items have less value or cost more to obtain. The most notable exception to this is commodities that have an intrinsic value because they are difficult to access, such as a wilderness or areas with low road densities.

The type of experience society desires in the study area and its associated value depends in large part on whether or not there are roads, their density, their condition, and whether or not they are open to motor vehicle use. The consequence may be a net benefit or a cost depending on what value the public assigns to the type of experience they desire.

Road management activities that benefit some members of society by enhancing their quality of life, may negatively impact resources that other members value for their quality of life. These may include impacts to resources such as soil, water, habitat, scenic beauty, or a reduction in value that people assign to an area such as limited accessibility or solitude. Public input is needed to provide information to evaluate the tradeoffs being considered and will help assign “value” to non-priced consequences.

***EC (3): How does the road system affect the distribution of benefits and cost among affected people?***

The accessibility to resources in the study area is important to the local economy, and commerce associated with forest visitors also has an economic influence on Polk, McMinn, and Monroe Counties and the communities of Benton, Etowah, Athens, and Tellico Plains. Since counties do not collect property taxes on federal land, activities that generate other tax revenue such as sales tax are beneficial to the community.

Forest roads are the primary means of access to forest resources. Changes to the road system and/or in road management can affect long-established access and use patterns, lifestyles, recreation activities, forest resource-related businesses, the collection of forest products, fire suppression, and the distribution of recreational opportunities available to users. These effects can change the distribution benefits and costs for all users.

Construction, maintenance, or decommissioning of roads in the area is not likely to have a significant long-term impact on the economic benefits derived from recreation activities unless there is a significant reduction in the total mileage of roads that provide access for this use.

The road system distributes the following economic benefits to businesses of various sizes as well as individuals:

- Income from the sale of gas, food, lodging, supplies, and souvenirs.
- Employment under Government contracts for:
  - road maintenance

- control of invasive species
- maintenance of wildlife openings
- vegetation management
- trail maintenance
- watershed management
- fire suppression
- maintenance of recreation sites

The road system creates different benefits and costs to people who use vehicles for travel within the area than to visitors who travel on foot or by other non-motorized methods. For those who choose non-motorized forms of transportation, the economics of the road system may cost more in terms of aesthetic values, air and noise pollution, and conflicts with motorized vehicle use.

Reduced road mileage and/or maintenance can lead to unbalanced recreation opportunities among users and directly affect the distribution of economic benefits and costs to the region. Closing roads would limit or eliminate access to those who are unable or unwilling to walk long distances and could increase the cost of resource removal, which usually requires mechanized equipment. This could have economic impacts for the local communities, which may depend on convenient access for employment opportunities.

In contrast, improved road access can increase the efficiency and effectiveness of fire-suppression activities, but can also contribute to an increase in the number of human-caused fires in the area. Closing or restricting roads to minimize traffic could be a benefit by reducing fires and keeping the road in a condition that facilitates use by fire fighting equipment.

State and county roads between communities affect how the benefits and costs associated with use of the area are distributed beyond the immediate communities. Forest Service roads #76 and #384 are part of a road network that includes the state and county road systems.

As stated in EC (2), the type of experiences and their associated values are dependent upon whether or not there are roads, how the roads are managed, and the desires of the user groups or individual. This may be a benefit or a cost depending on what value the public assigns to the type of experience they desire.

### **Commodity Production - Timber management (TM)**

#### ***TM (1): How does road spacing and location affect logging system feasibility?***

The spacing and location of existing roads were chosen to accommodate ground based logging systems and tandem trucks. Much of the road system would need to be improved to accommodate tractor trailers for hauling. There may be opportunity for nonground based logging systems in this watershed.

#### ***TM (2 and 3): How does the road system affect managing the suitable timber base and other lands? How does the road system affect access to timber stands needing silvicultural treatment?***

A large portion of the Conasauga and Wildcat Watershed Assessment Area (approximately 998 acres) is made up management prescriptions 1A, 1B, 12B, 5A, 5B and 7A. These areas are considered unsuitable for timber management.

The suitable land base (approximately 19,400 acres) in the assessment area is made up of management prescriptions 7B, 7E2, 8B and 9H. Road access is generally good for most of the area. Approximately 4,649 acres are at a distance greater than ¼ mile from an existing system road and approximately 387 acres are at a distance of greater than ½ mile of a system road. Some additional roading may be needed to gain access to some of the area.

### **Commodity Production - Minerals Management (MM)**

***MM (1): How does the road system affect access to locatable, leasable, and salable minerals?***

N/A. No locatable, leasable and salable minerals.

### **Commodity Production - Range Management (RM)**

***RM (1): How does the road system affect access to range allotments?***

N/A. No range allotments.

### **Commodity Production - Water Production (WP)**

***WP (1): How does the road system affect access, constructing, maintaining, monitoring, and operating water diversions, impoundments, and distribution canals or pipes?***

There are no known water diversions, impoundments, or distribution canals in this watershed.

***WP (2): How does road development and use affect water quality in municipal watersheds?***

See questions AQ (4), AQ (5), and AQ (7) in previous section, about how roads in this watershed may affect water quality for municipal water source.

***WP (3): How does the road system affect access to hydroelectric power generation?***

There are no hydroelectric power generation dams within this analysis area.

### **Commodity Production - Special Forest Products (SP)**

***SP (1): How does the road system affect access for collecting special forest products?***

Roads across the Forest are used to access sites for the collection of a variety of special forest products. There is nothing unique in regards to this relative to these two watersheds. Effects would be the same as those analyzed in the forest-wide RAP.



## **Special-Use Permits (SU)**

***SU (1): How does this road system affect managing special-use permit sites (concessionaires, communication sites, utility corridors, and so on)?***

One TVA Transmission line crosses the analysis area. The Hiwassee – Alcoa Transmission line crosses along State Route 68 on Tellico Mountain. Road access to this transmission line is critical to perform periodic maintenance. Working with TVA to identify any additional roads they use to as access this line.

Fort Loudoun Electric Corporation has 7.2 kv power transmission lines on National Forest land. along NFSR's 384, 126, 126C, and County and State Roads to supply power to Waucheesi Electronic Site and NFSR's 76, and Webb Branch Rd. to supply power to residences on private land. Necessary access roads are in place and they are adequate.

TDS Telcom has telephone lines on National Forest land along the same NFSR's as Fort Loudoun Electric Co-op. Necessary access roads are in place and they are adequate.

Etowah Utilities has a buried 7.2 kv. Line NF land in this RAP to provide power to Starr Mountain Electronic Site. A section of NFSR 297F is needed for access. .

Waucheesi Mountain Electronic Site is in this RAP. NFSR's 126C, 126, and 384 are used to access it.

Starr Mountain Electronic Site is in this RAP. . NFSR's 297, and 297F. are needed to access it.

The following roads are under road easement to private individuals:

- NFSR 2017 – Swafford
- NFSR 314J – McNabb (this is also an inholding)
- NFSR 76C – Holder
- NFSR 76D – Charest
- NFSR 76E – Frerichs
- NFSR 76F - Arthur Apicella

The following roads are used to access inholdings – they are not under easements:

- Haskins - NFSR 11011, 11012, & 11014
- Matoy – NFSR 5013, 5013A, & 76
- Herndon – NFSR 5013, & 76
- Watson – NFSR 40661, 40781, & 76

The following open NFR's are used to access private land: NFSR 5012, 76, and 297.

Monroe County Road Department has one road easement on National Forest land. A section of Old Furnace Rd., NFSR 76.

Webb Branch Rd., NFSR 11082, has an R/W in deed.

### **Inholdings and access**

- Matoy – NFSR 5013 & 5013A
- Herndon – NFSR 5013
- Watson – NFSR 40661 & 40781
- Haskins - NFSR 11011, 11012, & 11014
- McNabb - NFSR 314J
- There is one more just west of Wildcat Road – I do not know how it is accessed.

## **General Public Transportation (GT)**

### ***GT (1): How does this road system connect to public roads and provide primary access to communities?***

There are no specific communities accessed solely by Forest Service roads in the study area. The NFSRs in the study area connect to state and county roads that lead to the towns of Tellico Plains in Monroe County and Etowah in McMinn County. The collector road system within the study area is mainly State Highways and county roads but includes all or parts of the following Forest Service collector roads:

<u>Road No.</u>	<u>Road Name</u>
76	Lyons Creek (Old Furnace)
126	Bald River
384	Wildcat
341	Conasauga Creek
297	Starr Mountain
220	White Cliff

### ***GT (2): How does the road system connect large blocks of land in other ownership to public roads (ad hoc communities, subdivisions, in holdings, and so on)?***

There are numerous private land inholdings in the study area that are accessed by roads described in GT (1) plus some additional local roads that provide access through easement or special use permit. In addition to the roads in GT (1), the following roads provide access to private land:

Local roads open to the public that provide access to in-holdings or permitted uses:

<u>Road No.</u>	<u>Road Name</u>
76	Lyons Creek
384	Wildcat
126	Bald River
341	Conasauga Creek
297	Starr Mountain
220	White Cliff
11082	Webb Branch

11111	Alvin Branch Ridge
11112	Upper Conasauga
126C	Waucheesi Mountain
2111	Hooper Branch
384C	Miller Cemetery
5012	Holder
76C	Lyons Creek Spur
126A	Bald River ORV
443301	Payne Ridge

Local roads not usually open to the public that provide access to in-holdings or permitted uses:

<u>Road No.</u>	<u>Road Name</u>
11011	Hiwassee Land
11012	Hiwassee Lower Slope
11013	Hiwassee Land Easement
11014	Hiwassee Land Inholding
11082	Webb Branch
11091	South Pine Mountain
11092	North Pine Mountain
2017	Mecca Spur
297F	Starr Mountain Lookout
341J	McNabb Easement
40661	East Fork Lyons Creek
40781	Head Lyons Creek
5013	Murr Branch
5013A	Murr Branch Spur
76C	Lyons Creek Spur
76D	Don Charest R/W
76E	Frerichs Easement
76F	Apicella Easement

***GT (3): How does the road system affect managing roads with shared ownership or with limited jurisdiction (RS 2477, cost-share, prescriptive rights, FLPMA easements, FRTA easements, DOT easements)?***

There are no shared ownership (cost-share) roads on the Forest. The FS has a co-operative agreement with Monroe County for sharing various types of roadwork from planning to maintenance on roads of common interest to the FS and to the county.

***GT (4): How does the road system address the safety of road users?***

There are several open FS roads in the study area that are objective maintenance level 3, 4, or 5 (suitable for passenger cars). Since they are subject to the Highway Safety Act, safety of road users is a concern. Because they are designed for low speed and low volume, safety is usually not a major issue, but as private land has been subdivided, the number of land owners has

increased and has caused in an increase in traffic. There may be a need to work with the counties to accept responsibility for the maintenance of some roads.

The objective maintenance level 3, 4, & 5 roads receive routine maintenance which normally consists of blading graveled surface twice a year and roadside mowing every two years. Other maintenance activities that are done on an as-needed basis include gravel placement, hazard tree removal, slide repair, pothole repair, etc.

Most of the other roads (ML's 1 & 2) in the area are not usually open to the public and are used only when needed for specific purposes or managed for other uses, such as hunter access, horse trails, or timber sales. Safety is not as much of a concern on those roads since there is generally single use and very little traffic.

### **Administrative Uses (AU)**

#### ***AU (1): How does the road system affect access needed for research, inventory, and monitoring?***

Addressed in Forest Wide RAP

#### ***AU (2): How does the road system affect investigative or enforcement activities?***

Installing gates on the following roads will aid these activities by reducing the potential for illegal activities:

126C, 40661, 11011, 11012

Installing barriers or decommissioning the following roads will aid these activities by reducing the potential for illegal activities:

System roads: portion of #40661, portion of #11011, portion of #11012, portion of #2002

Unauthorized roads: spur off #443302, spur off of #11112, spur off of #40781

The construction of new roads or adding unauthorized roads to the transportation system would not adversely affect these activities if the roads are adequately closed to public motor vehicle use.

### **Protection (PT)**

#### ***PT (1): How does the road system affect fuels management?***

Roads are a key element in planning and implementing a fuels management program. Existing roads are used as control features for most of the prescribed burns that are implemented on the forest. Roads are preferred control features because they allow lines to be easily patrolled, rapid response to spot fires, and minimal ground disturbance is required. The current forest road system has been adequate to meet the needs of the fuels management program. It has not been necessary to consider construction of a road strictly for fuels management.

In general, decommissioning roads will restrict access during prescribed burns. Limited access may lead to larger or smaller, unfavorable burns. In the absence of an existing road, natural features such as ridge tops, coves or streams are used. However, using these types of features may also increase the need for additional ground disturbing activities to create an adequate control line. Most roads serve as an additional control feature that allows managers more flexibility when planning burn units. Decommissioning roads could also increase the probability of escape due to limited patrolling opportunities and the inability to respond to spot fires, outside control lines, with fire suppression equipment.

***PT (2): How does the road system affect the capacity of the Forest Service and cooperators to suppress wildfires?***

The current road system has not presented any problems in the Forests' ability to suppress wildfires. There have not been any critical areas identified that need roads specifically for wildfire suppression purposes. The forest continues to utilize all roads to the fullest extent possible during wildfire suppression efforts.

In general, decommissioning roads will restrict access of wildfire personnel and equipment. These restrictions may lead to increased fire size and a heightened probability that severe resource damage may occur. Most roads serve as excellent control features as well as escape routes for fire fighting personnel. Conversely, road construction may increase accessibility of wildfire personnel and equipment, limit fire size, and provide additional safety during wildfire suppression.

***PT (3): How does the road system affect risk to firefighters and to public safety?***

Roads serve two main functions during wildfire suppression efforts. First, they serve as access routes to the fire. Second, they serve as excellent escape routes for firefighters as well as the public. In the wildland/urban interface (WUI), roads should be designed, or upgraded, to allow for the access and egress of large structure protection equipment. Most other forest roads are able to accommodate the smaller, brush-type engines used by the forest and the cooperating state agency. Although roads can greatly increase the safety of firefighters, firefighters should not engage in suppression activities if the proper safety precautions have not been met.

***PT (4): How does the road system contribute to airborne dust emissions resulting in reduced visibility and human health concerns?***

This is of minor relevance to our Forest. Dust causes some temporary, localized problems of visibility during periods of low rainfall.

**Recreation – Unroaded Recreation (UR)**

***UR (1): Is there now or will there be in the future excess supply or excess demand for unroaded recreation opportunities?***

In addition to the UR(1)/RR(1) discussion in the Forest RAP, there is a demand for unroaded recreation opportunities outside of congressionally designated Wilderness. Nearby Bald River Gorge Wilderness can not meet the demand for large organized groups such as the Boy Scouts

that seek backcountry overnight or day hiking opportunities. Within designated Wilderness trail maintenance equipment is restricted to primitive tools only and group sizes are regulated. Located outside of designated Wilderness, the Warriors Passage National Recreation Trail could adjoin the Benton MacKaye and Unicoi Turnpike to create a larger trail network to accommodate overnight or day hiking opportunities. The Starr Mountain area could also be managed to provide an unroaded equestrian experience outside of Wilderness where trails could be constructed and maintained using mechanized equipment.

***UR (2): Is developing new roads into unroaded areas, decommissioning of existing roads, or changing the maintenance of existing roads causing substantial changes in the quantity, quality, or type of unroaded recreation opportunities?***

Before making changes to the road system, consideration should be given to potentially affected trail networks that provide unroaded recreation opportunities. Trail systems to consider include Starr Mountain Horse Trail Complex and the Warriors Passage NRT/Benton MacKaye/Unicoi Turnpike Complex. There may be opportunities to expand or enhance trail opportunities by converting existing roads to trails.

***UR (3): What are the adverse effects of noise and other disturbance caused by developing, using, and maintaining roads, on the quantity, quality, and type of unroaded recreation opportunities?***

See discussion in Forest RAP

***UR (4): Who participates in unroaded recreation in the areas affected by building, maintaining, and decommissioning roads?***

Visitors participate in a variety of recreation activities within unroaded portions of the assessment area including hunting, fishing, dispersed camping, day and overnight hiking (Warrior's Passage NRT and Conasauga Falls trail), and horseback riding on the Starr Mountain Trail Complex.

***UR (5): What are these participants' attachments to the area, how strong are their feelings, and are alternative opportunities and locations available?***

The following organizations have a sense of attachment to the resources that support their desired recreation activity - Trout Unlimited, Southern Appalachian Back Country Horsemen, Benton MacKaye Trail Association and Boy Scouts of America. These groups and others volunteer to help conserve or improve the affected resources and have a sense of ownership. Alternative opportunities and locations for these activities are limited due to surrounding private lands.

## **Recreation - Road Related Recreation (RR)**

***RR (1): Is there now or will there be in the future excess supply or excess demand for roaded recreation opportunities?***

In addition to the UR(1)/RR(1) discussion in the Forest RAP, a local motorcycle user group has expressed interest in motorized use of the Gravelstand Top Trail #136. This use was allowed in

the past, but the trail is now encompassed within the 12.B prescription, Remote Backcountry - Non-motorized. The acres within this 12.B prescription contribute to the revised forest plan's objective (35.01) to manage at least 75,000 acres of backcountry outside of designated Wilderness for backcountry recreation. The supply of motorized recreation opportunities is limited due to resource concerns. See Appendix J in the revised Forest Plan p.461.

***RR (2): Is developing new roads into unroaded areas, decommissioning existing roads, or changing maintenance of existing roads causing significant changes in the quantity, quality, or type of roaded recreation opportunities?***

Changing maintenance levels of existing roads would change the experience of roaded recreation opportunities. See discussions under SI(8) and SI(10). Decommissioning roads or developing new roads would potentially have a greater impact to unroaded than roaded recreation opportunities because they are more limited. See discussions under UR(2).

***RR (3): What are the adverse effects of noise and other disturbances caused by building, using, and maintaining roads on the quantity, quality, or type of roaded recreation opportunities?***

See discussion in Forest RAP.

***RR (4): Who participates in road-related recreation in the areas affected by road building, changes in road maintenance, or road decommissioning?***

Visitors primarily participate in dispersed recreation activities within the assessment area. Roads are used to access trails, dispersed campsites, creeks and driving for pleasure.

***RR (5): What are these participants attachments to the area, how strong are their feelings, and are alternative opportunities and locations available?***

The majority of participants in the activities mentioned in RR(4) reside in the surrounding communities. Many residents consider the national forest as part of their community or backyard, so there is a sense of ownership and entitlement. There may be other areas available to provide roaded recreation opportunities, but not on public lands close to the local populations.

## **Passive-Use Value (PV)**

***PV (1): Do areas planned for road entry, closure, or decommissioning have unique physical or biological characteristics, such as unique natural features and threatened or endangered species?***

Detailed surveys have not been conducted within all portions of the watershed. If areas planned for road entry do have unique features then they will be considered during the planning process.

***PV (2): Do areas planned for road construction, closure, or decommissioning have unique cultural, traditional, symbolic, sacred, spiritual, or religious significance?***

No.

***PV (3): What, if any, groups of people (ethnic groups, subcultures, and so on) hold cultural, symbolic, spiritual, sacred, traditional, or religious values for unroaded areas planned for road entry or road closure?***

There are no known groups of people (ethnic groups, subcultures, etc.) that hold cultural, symbolic, spiritual, sacred, traditional, or religious values for unroaded areas planned for road entry or road closure.

***PV (4): Will road construction, closure, or decommissioning significantly affect passive-use value?***

In addition to the discussion in the Forest-wide RAP, passive values to consider would include the cultural significance of the Warriors Passage National Recreation Trail, Trail of Tears, and Unicoi Turnpike network; designated Wilderness and remote backcountry resources; and scenic viewsheds managed for high and very high scenic integrity.

## **Social Issues (SI)**

***SI (1): What are people's perceived needs and values for roads? How does road management affect people's dependence on, need for, and desire for roads?***

See discussion in Forest RAP.

***SI (2): What are people's perceived needs and values for access? How does road management affect people's dependence on, need for, and desire for access?***

See discussion in Forest RAP.

***SI (3): How does the road system affect access to paleontological, archaeological, and historical sites?***

The road system does not affect access to paleontological, archaeological and historical sites.

***SI (4): How does the road system affect cultural and traditional uses (such as plant gathering, and access to traditional and cultural sites) and American Indian treaty rights?***

The existing road system facilitates cultural and traditional uses (such as plant gathering, and access to traditional and cultural sites). Road closures will not impinge on American Indian treaty rights.

***SI (5): How are roads that are historic sites affected by road management?***



Existing segments of the historic Unicoi Turnpike, principally located in the Conasauga Creek drainage, which has been recently designated as a part of the Trail of Tears National Historic Trail, will be, where feasible, restored, developed and interpreted for their historic values.

***SI (6): How is community social and economic health affected by road management (for example, lifestyles, businesses, tourism industry, infrastructure maintenance)?***

State Highway 68 and Cherohala Skyway (TN 165) have become vital components of the regional tourism industry bringing visitors to the communities of Coker Creek and Tellico Plains. These communities provide the needed support services and host festivals and events to increase business and tourism opportunities. Managing road access to the natural, cultural and recreational resources within the Cherokee National Forest provides visitors with a diversity of destinations and opportunities.

***SI (7): What is the perceived social and economic dependency of a community on an unroaded area versus the value of that unroaded area for its intrinsic existence and symbolic values?***

The surrounding communities' recognition of remote backcountry as an attraction and potential economic resource has increased over the years. Recreation opportunities linked to the unroaded areas have been advertised by the Tennessee Overhill Heritage Association (non-profit organization) in various media outlets including *Backpacker* magazine.

<http://www.tennesseeoverhill.com/>

***SI (8): How does road management affect wilderness attributes, including natural integrity, natural appearance, opportunities for solitude, and opportunities for primitive recreation?***

In general paved roads provide visitors with a low risk, low challenge traveling experience. Graveled and/or native surfaced roads offer a more challenging, risky experience. Road management in the assessment area presently offers a desirable progression of road conditions aligned with the desired recreation opportunity spectrum (ROS).

State Highway 68 and Cherohala Skyway (TN 165) offer visitors safe, low risk sightseeing opportunities. The adjoining Tellico River Road is paved, but narrow without a centerline. Consequently, the experience traveling to Bald River Falls may be perceived as more challenging and risky. Likewise, continuing to travel on gravelled roads adjoining the Tellico River Road, i.e. Wildcat Road may be perceived as unsuitable for passenger vehicles and an opportunity to enjoy traveling in a sport utility vehicle or truck.

Several roads in the assessment area lead to trailheads that access unroaded areas. The "country miles" traveled on these more primitive roads are essential to creating the desired experience of remoteness and primitiveness related to dispersed recreation.

***SI (9): What are the traditional uses of animal and plant species within the area of analysis?***

It is possible that the highest elevations in Wildcat Creek watershed provide sites for the collection of ramps. Numerous other plant species are likely collected throughout the two

watersheds though locations are not easily disclosed. Typical species sought by collectors include ginseng, flowering shrubs for transplant, and numerous species of medicinal herbs.

***SI (10): How does road management affect people's sense of place?***

As stated for SI 8, the traffic surface level and maintenance levels of roads leading to backcountry and primitive recreation areas should be appropriate for the desired ROS setting. Reference the revised Forest Plan to determine the ROS class emphasized in each prescription area. The type and frequency of recreation guide signs also contribute to a visitor's sense of place.

**Civil Rights and Environmental Justice (CR)**

***CR (1): How does the road system, or its management, affect certain groups of people (minority, ethnic, cultural, racial, disabled, and low-income groups)?***

Addressed in Forest Wide RAP

**Table 2. Documentation for Travel analysis Process Step 4.**

<b>Question Number</b>	<b>Addressed in Analysis?</b>	<b>Rationale For Questions Not Addressed</b>
<b>EF (1)</b>	Yes	
<b>EF (2)</b>	Yes	
<b>EF (3)</b>	Yes	
<b>EF (4)</b>	Yes	
<b>EF (5)</b>	Yes	
<b>AQ (1)</b>	Yes	
<b>AQ (2)</b>	Yes	
<b>AQ (3)</b>	Yes	
<b>AQ (4)</b>	Yes	
<b>AQ (5)</b>	Y/N	Addressed in Forest RAP
<b>AQ (6)</b>	Yes	
<b>AQ (7)</b>	Yes	
<b>AQ (8)</b>	Yes	
<b>AQ (9)</b>	Yes	
<b>AQ (10)</b>	Yes	
<b>AQ (11)</b>	Yes	
<b>AQ (12)</b>	Yes	
<b>AQ (13)</b>	Yes	
<b>AQ (14)</b>	Yes	
<b>TW (1)</b>	Yes	
<b>TW (2)</b>	Yes	
<b>TW (3)</b>	Yes	
<b>TW (4)</b>	Yes	
<b>EC (1)</b>	Yes	
<b>EC (2)</b>	Yes	
<b>EC (3)</b>	Yes	
<b>TM (1)</b>	Yes	
<b>TM (2)</b>	Yes	
<b>TM (3)</b>	Yes	
<b>MM (1)</b>	Yes	
<b>RM (1)</b>	Yes	
<b>WP (1)</b>	Yes	
<b>WP (2)</b>	Yes	
<b>WP (3)</b>	Yes	
<b>SP (1)</b>	Yes	
<b>SU (1)</b>	Yes	
<b>GT (1)</b>	Yes	
<b>GT (2)</b>	Yes	
<b>GT (3)</b>	Yes	
<b>GT (4)</b>	Yes	
<b>AU (1)</b>	No	Addressed in Forest RAP
<b>AU (2)</b>	Yes	
<b>PT (1)</b>	Yes	
<b>PT (2)</b>	Yes	
<b>PT (3)</b>	Yes	
<b>PT (4)</b>	Yes	
<b>UR (1)</b>	Yes	
<b>UR (2)</b>	Yes	
<b>UR (3)</b>	No	Addressed in Forest RAP

**Table 2. Documentation for Travel analysis Process Step 4.**

<b>Question Number</b>	<b>Addressed in Analysis?</b>	<b>Rationale For Questions Not Addressed</b>
<b>UR (4)</b>	Yes	
<b>UR (5)</b>	Yes	
<b>RR (1)</b>	Yes	
<b>RR (2)</b>	Yes	
<b>RR (3)</b>	No	Addressed in Forest RAP
<b>RR (4)</b>	Yes	
<b>RR (5)</b>	Yes	
<b>PV (1)</b>	Yes	
<b>PV (2)</b>	Yes	
<b>PV (3)</b>	Yes	
<b>PV (4)</b>	Yes	
<b>SI (1)</b>	No	Addressed in Forest RAP
<b>SI (2)</b>	No	Addressed in Forest RAP
<b>SI (3)</b>	Yes	
<b>SI (4)</b>	Yes	
<b>SI (5)</b>	Yes	
<b>SI (6)</b>	Yes	
<b>SI (7)</b>	Yes	
<b>SI (8)</b>	Yes	
<b>SI (9)</b>	Yes	
<b>SI (10)</b>	Yes	
<b>CR (1)</b>	No	Addressed in Forest RAP

## **Ability of the Transportation System to meet Objectives**

To meet the objective of determining needed and unneeded roads (minimum road system, trails, and areas for motor vehicle use), each route segment was examined to determine its uses. These uses are displayed in Table 4

- Recreation/Heritage Access
- Vegetation Management Access
- Access to Private Land/Special Uses
- Wildlife/Fish Management
- Fire Management

Based on these uses, the transportation system needed, as well as unneeded roads, were identified. These are displayed on Map 26. The results of this analysis indicated there weren't any roads that could be decommissioned at this time.

## **STEP 5 DESCRIBING OPPORTUNITIES AND SETTING PRIORITIES**

### **Purpose and Products**

The purpose of this step is to:

- compare the current transportation system with what is desirable or acceptable, and
- describe options for modifying the transportation system that would achieve desirable or acceptable conditions.

The products of this step are:

- a map and descriptive ranking of the problems and risks posed by the current road system,
- a map and list of opportunities, by priority, for addressing important problems and risks, and
- a prioritized list of specific actions, projects, or forest plan adjustments requiring NEPA analysis.

## **Problems and Risks Posed by the Current Transportation System**

### **Overall Priorities for Conasauga and Wildcat Creeks Ecosystem Assessment Area**

The priorities listed below in the table and in the site-specific descriptions are prioritized by resource area. The Team analyzed the individual resource priorities in order to develop larger, overall priorities for the assessment area. These priorities are:

- Recreation/Heritage Access
- Vegetation Management Access
- Access to Private Land/Special Uses
- Wildlife/Fish Management
- Fire Management.

### **Road Maintenance Needs**

During the course of completing maintenance surveys of the Forest Service roads within this assessment area, a large amount of data was gathered on maintenance needs on the FS roads open to motor vehicle use. Data on roads closed to motor vehicle use is based on random sampling. Condition surveys were also completed on unauthorized roads that have the potential to be added to the system. Table 3 lists the work needed.

**Table 3. Road Maintenance Needed on National Forest System Roads in the Conasauga-Wildcat Watershed Assessment Area**

ROAD #	ROAD NAME	LENGTH	ANNUAL COSTS	DEFERRED COSTS	RMO	MACHINE GRADE	GRAVEL	DITCH	PAVE	BRUSH	BRIDGE MAINT.	CULVERTS	REMARKS
11011	HIWASSEE LAND	4.87	\$916	\$21,818	D2-FS							X	
11012	HIWASSEE LOWER SLOPE	1.95	\$367	\$8,736	D2-FS							X	
11013	HIWASSEE LAND EASEMENT	0.24	\$45	\$1,075	D2-FS								
11014	HIWASSEE LAND INHOLDING	0.36	\$68	\$1,613	D2-FS								
11082	WEBB BRANCH	0.9	\$6,205	\$8,690	C3	X	X			X			
11082	WEBB BRANCH	0.3	\$2,068	\$2,897	C3	X	X			X			
11091	S. PINE MT	0.62	\$117	\$2,778	D2-HC								
11092	N. PINE MT.	1.84	\$346	\$8,243	D2-HC								
11111	ALVIN BR. RIDGE	0.52	\$98	\$2,330	D2-HC								
11111	ALVIN BR. RIDGE	0.01	\$2	\$45	D1								
11112	UPPER CONASAUGA	0.62	\$117	\$2,778	D2-HC								
11112	UPPER CONASAUGA	0.02	\$4	\$90	D1								
1131	COKER CR.	0.52	\$98	\$2,330	D2-FS							X	
126	BALD RIVER	2.69	\$18,545	\$25,972	C3	X	X	X		X		X	
126A	BALD RIVER ORV	0.51	\$3,516	\$4,924	D2-HC								
126C	WAUCHEESI MT	1.55	\$291	\$6,944	D2-HC								
2002	HATTER BR.	4.56	\$857	\$20,429	D2-FS							X	
2002A	HATTER BR. SPUR	0.63	\$118	\$2,822	D2-FS								
2002B	LOWER HATTER BR.	0.28	\$53	\$1,254	D1								
2014	FOX KNOB	1.23	\$231	\$5,510	D1								
2017	MECCA SPUR	0.73	\$137	\$3,270	D2-FS								
2104	BORIN TOP-KINGDOM	1.08	\$203	\$4,838	D2-FS								
2104A	BORIN TOP-KINGDOM SPUR	0.28	\$53	\$1,254	D2-FS								
2109	CATASKA MT.	5.46	\$1,026	\$24,461	D2-FS								
2109A	FERN BR.	1.98	\$372	\$8,870	D1							X	
2111	HOOPER BR.	0.13	\$24	\$1,255	C3	X	X						
2111	HOOPER BR.	1.2	\$226	\$5,376	D1								
2112	GRINDSTONE RIDGE	0.92	\$173	\$4,122	D2-FS								
220	WHITE CLIFF	1.44	\$9,927	\$13,903	C3								
220C	WHITE CLIFF SPUR C	0.32	\$60	\$1,434	D2-FS							X	
297	STARR MT	3.3	\$22,750	\$31,862	C3	X	X	X		X		X	
297	STARR MT	2.75	\$517	\$12,320	D1								
297A	STARR MT EXT.	0.96	\$180	\$4,301	D2-FS								

**Table 3. Road Maintenance Needed on National Forest System Roads in the Conasauga-Wildcat Watershed Assessment Area**

ROAD #	ROAD NAME	LENGTH	ANNUAL COSTS	DEFERRED COSTS	RMO	MACHINE GRADE	GRAVEL	DITCH	PAVE	BRUSH	BRIDGE MAINT.	CULVERTS	REMARKS
297F	STARR MT LOOKOUT	0.24	\$45	\$1,075	D2-FS								
341	CONASAUGA CR.	6.13	\$42,260	\$59,185	C3	X	X			X		X	
341A	CONASAUGA SPUR A	0.83	\$5,722	\$8,014	C3	X	X			X			
341B	CONASAUGA SPUR B	1.35	\$254	\$6,048	D2-FS								
341C	CONASAUGA SPUR C	0.49	\$92	\$2,195	D2-FS								
341F	CONASAUGA SPUR F	0.33	\$62	\$1,478	D2-FS								
341H	CONASAUGA SPUR H	0.98	\$184	\$4,390	D2-FS								
341J	MCNABB EASEMENT	0.34	\$64	\$1,523	D2-HC	X	X			X			
341K	CONASAUGA SPUR K	0.37	\$70	\$1,658	D2-FS								
3410	HOG BR.	1.22	\$229	\$5,466	D2-FS								
384	WILDCAT CR.	4.79	\$33,022	\$46,247	C3	X	X	X		X	X	X	
384C	MILLER CEMETERY	1.31	\$9,031	\$12,648	C3	X	X	X		X		X	
384D	WILDCAT SPUR	1.36	\$256	\$6,093	D1								
40641	NATTY CR SPUR	0.66	\$124	\$2,957	D2-FS								
40661	E. FORK LYONS CR	1.49	\$280	\$6,675	D2-FS								
40681	BIG RIDGE	2.28	\$429	\$10,214	D2-FS							X	
40682	STILLHOUSE CR	2.58	\$485	\$11,558	D2-FS								
40683	BIG RIDGE SPUR	0.24	\$45	\$1,075	D2-FS								
40781	HEAD LYONS CR	0.5	\$94	\$2,240	D2-FS								
443301	PAYNE RIDGE	1.81	\$340	\$8,109	C3/D2-FS	X	X			X			
443302	PAYNE RIDGE SPUR	1.03	\$194	\$4,614	D2-FS								
5012	HOLDER	1.29	\$8,893	\$12,455	C3	X	X			X			
5013	MURR BR	2.23	\$419	\$9,990	D2-HC	X	X			X		X	
5013A	MURR BR SPUR A	0.22	\$41	\$986	D2-HC	X	X			X		X	
76	LYONS CR (OLD FURNACE)	6.77	\$46,672	\$65,364	C3	X	X	X		X		X	
76B	LYONS CR SPUR B	0.62	\$117	\$2,778	D2-FS	X							
76C	LYONS CR SPUR C (HOLDER)	0.71	\$133	\$3,181	D2-HC	X	X						
76C	LYONS CR SPUR C (HOLDER)	0.53	\$100	\$2,374	D2-HC	X	X						
76D	DON CHAREST R/W	0.28	\$53	\$1,254	D2-HC	X	X						
76E	FRERICHS EASEMENT	0.55	\$103	\$2,464	D2-HC	X	X						
76F	ARTHUR APICELLA EASEMENT	0.03	\$6	\$134	D2-HC	X	X						

## **Opportunities for Travel Management**

Table 4 summarizes recommendations in response to the issues identified in Step 3 and the questions answered in Step 4. A more detailed narrative follows the table, and priorities are listed above. Maps are included in Appendix A to assist in tracking the recommendations. Each specialist identified recommendations based on how the transportation system affected their resource; therefore, conflicting recommendations may exist between resource areas due to differing needs.

### **Aquatics**

Road surfaces and ditches are properly aligned and graded to minimize sediment runoff.

As road improvements are made, culverts are replaced to allow aquatic species passage.

Locate sediment sources in Laurel Creek watershed and stabilize them.



Table 4. Summary of Road Recommendations by Issues (Y or N answers)

ROAD #	ROAD NAME	MILES IN WATERSHED	Private Access	WildFire Suppression Use	Recreation/Heritage Use	Wildlife Use	Vegetation Management	Environmental Risk	Recommendation to be considered
<b>NATIONAL FOREST SYSTEM ROADS</b>									
11011	HIWASSEE LAND	4.87	Y	Y	Horse Trail	N	Y		There is no current legal access. property owners are not willing to grant easement. Currently gated on pvt land near county road, but not locked. Gated at #297. Install gates at property line to control access. See Jason's list for suggestions for road management/condition. Update jurisdiction in road inventory of the portion of the road that's on private land. Consider <b>DECOMMISSIONING approx. 4.15 miles</b> of road from CW-6 (if added to the system) to #297.
11012	HIWASSEE LOWER SLOPE	1.95	Y	Y	Horse Trail	N	Y	2 streams crossings	Install gates at property line to control access. Update jurisdiction in road inventory of the portion of the road that's on private land (Southwest end at intersection with #11011). Could relocate section of road on the Northeast end (near TN Dept. of Forestry Building) so that road is all on FS land & decommission section of old road that is causing resource damage (no change in total system road mileage). Potential trailhead parking.
11013	HIWASSEE LAND EASEMENT	0.24	Y	N	N	N	N		FS has ROW transferred with land purchase. Manage as is. Contact property owner about access thru gate accessed via #11011. Install gates at property line to control access or consider <b>DECOMMISSIONING approx. 0.36 miles</b> IF USING CW-6 TO ACCESS IN-HOLDING
11014	HIWASSEE LAND INHOLDING	0.36	Y	N	N	N	N		Look at spring creek assessment
297	STARR MT	3.30	Y	Y	Y	Y	Y		Look at spring creek assessment
297	STARR MT	2.75	Y	Y	Y	Y	Y		Look at spring creek assessment
297A	STARR MT EXT.	0.96	N	Y	N	Y	Y		Manage as is. Potential horse trail to tie in with 11041 etc.
297F	STARR MT LOOKOUT	0.24	Y Permit	Y	N	N	Y		Manage as is.
2014	FOX KNOB	1.23	N	Y	Y	Y	Y		Manage as is. Trailhead
2017	MECCA SPUR	0.73	Y	Y	N	N	Y		Manage as is. FS owns tract special use permit. Request county to take over due to houses
11082	WEBB BRANCH	0.90	Y	Y	N	N	Y	follows stream	Manage as is. Consider relocation farther from creek
11082	WEBB BRANCH	0.30	Y	Y	N	N	Y		Manage as is. Consider relocation farther from creek
11091	S. PINE MT	0.62	Y	Y	N	N	Y		Manage as is.
11092	N. PINE MT.	1.84	N	Y	N	N	Y		Manage as is.
2002	HATTER BR.	4.56	Y	Y	N	Y	Y		Manage as is.
2002A	HATTER BR. SPUR	0.63	N	Y	N	N	Y		Manage as is.
2002B	LOWER HATTER BR.	0.28	N	Y	N	N	Y		Manage as is.
220	WHITE CLIFF	1.44	Y						Manage as is. Addressed in Spring Creek watershed assessment
220C	WHITE CLIFF SPUR C	0.32	N	Y	N	Y	Y		Manage as is.
11111	ALVIN BR. RIDGE	0.52	Y	Y	N	N	Y		Manage as is.
11111	ALVIN BR. RIDGE	0.01	Y	Y	N	N	Y		Manage as is.
11112	UPPER CONASAUGA	0.62	Y	Y	N	N	Y		On private with ROW. Manage as is.
11112	UPPER CONASAUGA	0.02	Y	Y	N	N	Y		Manage as is.
2104	BORIN TOP-KINGDOM	1.08	N	Y	N	N	Y		Manage as is
2104A	BORIN TOP-KINGDOM SPUR	0.28	N	Y	N	N	Y		Manage as is. ties into 2109 via unauthorized road (CW-1) that needs to be added to system- see below
2109	CATASKA MT.	5.46	N	Y	N	Y	Y		Manage as is. Potential to Consider <b>DECOMMISSIONING approx. 0.4 miles</b> . segment in the Hurricane Br drainage (South of 2109A) Allow for temporary access of needed. 1/2 mile to 1/4 mile.
2109A	FERN BR.	1.98	N	Y	N	N	Y		Manage as is.
2111	HOOPER BR.	1.20	N	Y	N	N	Y		Manage as is.
2111	HOOPER BR.	0.13	Y	Y	N	N	Y		Easement
2112	GRINDSTONE RIDGE	0.92	N	Y	N	N	Y		Manage as is.
341	CONASAUGA CR.	6.13	Y	Y	Y	Y	Y	4 stream crossings	Manage as is. Need bridges at creek crossings. Riparian degradation from dispersed camping and atv use. Illegal gravel harvesting. Options to consider to reduce impact of road on Conasauga Cr: 1) relocate sections road to eliminate fords & decommission old road, 2) Consider <b>DECOMMISSIONING approx. 0.41 miles</b> of road so that the road is not a thru road & some or all of the fords would not be used

Table 4. Summary of Road Recommendations by Issues (Y or N answers)

ROAD #	ROAD NAME	MILES IN WATERSHED	Private Access	WildFire Suppression Use	Recreation/Heritage Use	Wildlife Use	Vegetation Management	Environmental Risk	Recommendation to be considered
341A	CONASAUGA SPUR A	0.83	N	Y	Y	N	Y		Manage as is.
341B	CONASAUGA SPUR B	1.35							See MUTR
341C	CONASAUGA SPUR C	0.49	N	Y	N	N	Y		Manage as is.
341F	CONASAUGA SPUR F	0.33	N	Y	N	N	Y		Built for Grindstone sale Manage as is.
341H	CONASAUGA SPUR H	0.98	N	Y	N	Y	Y		Manage as is
341J	MCNABB EASEMENT	0.34	Y	Y	N	N	N		Manage as is.
341K	CONASAUGA SPUR K	0.37	N	Y	Y	N	Y		Built for Grindstone sale Manage as is.
3410	HOG BR.	1.22	N	Y	N	Y	Y		Manage as is.
40641	NATTY CR SPUR	0.66	N	Y	N	Y	Y		Manage as is. Update map: doesn't cross stream
1131	COKER CR.	0.52	Y	Y	N	N	Y		Manage as is. FS has easement.
126	BALD RIVER	2.69	N	Y	Y	Y	Y		Manage as is.
126A	BALD RIVER ORV	0.51	Y	Y	Y	N	Y		Manage as is. Decommission from trail to east.
126C	WAUCHEESI MT	1.55	Y	Y	Y	N	Y		Manage as is. Gate exists but not closed.
384	WILDCAT CR.	4.79	Y	Y	Y	Y	Y		Manage as is. FS has easement to smithfield road
384C	MILLER CEMETERY	1.31	Y	Y	Y	Y	Y		Manage as is.
384D	WILDCAT SPUR	1.36	N	Y	N	N	Y		Manage as is.
40661	E. FORK LYONS CR	1.49	Y	Y	N	N	Y		see 5013 recommendation; install gate at #40781 intersection to prevent illegal use by owners of in-holdings
40681	BIG RIDGE	2.28	N	Y	N	Y	Y		Manage as is.
40682	STILLHOUSE CR	2.58	N	Y	N	Y	Y		Manage as is.
40683	BIG RIDGE SPUR	0.24	N	Y	N	N	Y		Manage as is.
40781	HEAD LYONS CR	0.50	Y	Y	N	N	Y		Manage as is.
443301	PAYNE RIDGE	1.81	Y	Y	N	N	Y		FS has ROW Witt Road Request County to take over private portion
443302	PAYNE RIDGE SPUR	1.03	Y	Y	N	N	Y		Manage as is.
5012	HOLDER	1.29	Y	Y	N	N	Y		Manage as is. Request County to take over road.
5013	MURR BR	2.23	Y	Y	N	N	Y		Fish passage limitation-need culverts. Consider <b>DECOMMISSIONING</b> approx. 0.2 mile segment of road between intersection w/ 40661 & Herndon property which is adjacent to & in a small drainage
5013A	MURR BR SPUR A	0.22	Y	Y	N	N	Y	stream	Manage as is. Move road from adjacent to creek if opportunity arises
76	LYONS CR (OLD FURNACE)	6.77	Y	Y	Y	Y	Y		Manage as is.
76B	LYONS CR SPUR B	0.62	N	Y	N	N	Y		Manage as is.
76C	LYONS CR SPUR C (HOLDER)	0.71	Y	Y	N	N	Y		Manage as is. Request County to take over road.
76C	LYONS CR SPUR C (HOLDER)	0.53	Y	Y	N	N	Y		Manage as is.
76D	DON CHAREST R/W	0.28	Y	Y	N	Y	Y		Manage as is.
76E	FRERICHS EASEMENT	0.55	Y	Y	N	N	Y		Manage as is.
76F	ARTHUR APICELLA EASEMENT	0.03	Y	Y	N	N	N		Manage as is.

MILES SYSTEM ROADS 88.33

UNAUTHORIZED ROADS									
CW-1	Unauthorized road at 2104A	0.73	N	Y	N	N	Y		between 2104A and 2109 Add to system
CW-2	Unauthorized road at 443302 and Payne ridge private road	0.25		Y	N	N	N		Decommission
CW-3	Unauthorized road at 40781	0.21	Y	Y	N	N	N		Decommission or bring under permit
CW-4	Unauthorized road at 76C	0.23	Y	Y	N	N	N		Decommission
CW-5	Unauthorized road at 76C	0.12	Y	Y	N	N	N		Decommission
CW-6	Unauthorized road at #11011	0.16	Y	Y	Y	N	N		Add to system

MILES OF UNAUTHORIZED ROADS 1.70

Table 4. Summary of Road Recommendations by Issues (Y or N answers)

ROAD #	ROAD NAME	MILES IN WATERSHED	Private Access	WildFire Suppression Use	Recreation/Heritage Use	Wildlife Use	Vegetation Management	Environmental Risk	Recommendation to be considered
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TOTAL MILES (ALL ROADS): 90.03

System roads to be considered for decommissioning: 5.52

Unauthorized roads to be considered for decommissioning: 0.81

Total all roads to be considered for decommissioning: 6.33

Unauthorized roads to be considered for adding to the system: 0.89

Net change to road mileage: -5.44

COUNTY ROADS:

CH163	0.07
CH603	2.74
CH604	0.49
CH607	1.05
CH610	0.66
CH616	0.21
CH617	2.09
CH623	3
CH632	0.22
CH633	0.71
CH640	1.32
CH640-1	0.64
CH642	1.43
CH648	0.66
CH650	0.82
CH651	3.6
CH652	2.58
CH665	5.64
CH671	0.58

STATE ROADS:

TN310	1.88
TN315	3.22
TN39-1	3.12
TN68-1	4.36

## Recommendations

*Wildlife/Fish Management* – Future road construction and maintenance should recognize both the benefits and adverse effects to wildlife.

### *Non-native Invasive Plants*

- Non-native invasive plants are a problem across the forest and are commonly encountered along forest roads. Discreet populations of non-native invasive plants should be reported to the Forest Botanist using the appropriate site documentation forms. All reported sites are input into the NRIS reporting system and catalogued for future treatment. It is important that future road maintenance, construction, or decommissioning projects recognize the existence of these species and provide opportunities to reduce their spread rather than exacerbate the situation.

### *Aquatics*

No priority road improvements are recommended.

### Actions To Be Considered:

-Decommission the following unauthorized roads:

- CW-2: 0.25 miles
- CW-3: 0.21 miles
- CW-4: 0.23 miles
- CW-5: 0.12 miles

-Add following unauthorized roads to the transportation system:

- CW-1: 0.73 miles

-Decommission the following system roads:

- #11013: 0.24 miles
- #11112: 0.02 miles

-Decommission segments of the following maintenance level 2 “through” roads as shown on the map (approximate mileage):

- #2002: 0.53 miles
- #5013: 0.19 miles
- #11012: 0.67 miles (continue to manage decommissioned segment as a trail)
- #11011: 0.58 miles (continue to manage decommissioned segment as a trail)
- #2109: 0.39 miles (if road CW-1 is added to system)

-Install closed gates on the following roads:

- #126C to try to prevent vandalism to electronic sites; this would mean changing the RMO for the segment of road beyond the gate to D2-FS.
- #11011 (on West end); to prevent unauthorized motor vehicle use; would be consistent with the RMO.
- #11012 (on West end); to prevent unauthorized motor vehicle use; would be consistent with the RMO.

- #40661 at intersection w/ #40781 to prevent illegal use by owners of in-holdings: would be consistent with the RMO.

-Request that Monroe County maintain the following roads:

- #2017
- #443302
- #5012
- #76C

On 2/24/11, members of the IDT met to evaluate these recommendations in more detail. Also, additional information has been obtained concerning road easements, so the actions to be considered have been updated as follows:

**-Decommission the following unauthorized roads:**

- CW-2: approx. 0.25 miles
- CW-3: approx. 0.21 miles
- CW-4: approx. 0.23 miles
- CW-5: approx. 0.12 miles

**-Add following unauthorized roads to the transportation system:**

- CW-1: approx. 0.73 miles (connects #2104A to #2109 providing access to areas accessed by the section of #2109 that will be decommissioned)
- CW-6: approx. 0.16 miles (new location of #11014)

**-Decommission the following system roads:**

- #11011: Decommission the section of road from the intersection with #11012 to the intersection with #297 (approx. 4.15 miles); continue to manage decommissioned segment as a trail.

**-Decommission segments of the following maintenance level 2 “through” roads as shown on the map (approximate mileage):**

- #5013: approx. 0.19 miles
- #2109: approx. 0.39 miles
- #341: approx. 0.46 miles between Northernmost & Southernmost fords.

**-The following roads should not be decommissioned because they will be needed for resource management:**

- #11112: the road should be blocked at the property line to prevent unauthorized use.
- #11012
- #11013
- #2002

**-Install closed gates on the following roads:**

- #11011: at property line on West end to prevent unauthorized motor vehicle use; would be consistent with the RMO. If a section of the road is decommissioned, the road would be blocked with a natural barrier instead of a gate.
- #11012: at property line on West end to prevent unauthorized motor vehicle use; would be consistent with the RMO.
- #40661 at intersection with #40781 to prevent unauthorized use by owners of in-holdings; would be consistent with the RMO.

-126C: Gates will not be installed; a security fence has been installed at the FS electronic site which will likely eliminate the vandalism.

-#341: Relocate a section of the road to eliminate or reduce the number of fords. This would likely require a bridge as well as construction on 60% side slopes.

-#11012: (North end) Relocate the section of road near the Tennessee Department of Forestry building so that it is on FS land and decommission the old road; this will eliminate the drainage problems on the existing road location.

-Request that Monroe County maintain the following roads:

- #2017
- #443302
- #5012
- #76C

On 1/8/14, members of the IDT met to evaluate these recommendations in more detail. Also, additional information has been obtained concerning road easements, so the actions to be considered have been updated as follows:

76B We decided to decommission in the alternative only since we also dropped the stand it accesses in the alternative. Thought process was that same stand was in the Big ridge EA in 2005 and it was never logged because stand value would not support rd reconstruction. Thought that might happen again so deleted stand from alt. If we end up not using the road in two EAs then we probably don't need the road.... About ½ mi. and probably could use temp if we really needed access....

341A - We want to decommission that part of the road that is past the Conasauga Falls Trailhead in both alternatives. It appears on the shapefile and attribute table but is no longer readily visible on the ground. If the shapefile/table is correct then we would like to take credit for that portion of the road has "rewilded" on its own. Since it is adjacent to a trailhead it seems like a major feat that folks don't continue on down the two track path.....

341c We recommended decommission in both alts. after sale closure. However, Eric still wants to harvest the unit so it is also in the EA to be reconstructed. I personally question \$ to reconstruct and then decommission???

11092 North Pine Mountain. We recommended decommission in both alts for that last .5 mi. segment of the road. Essentially where it crosses a corner of private. And really doesn't access that much suitable NFS land.

## **NEPA Analysis Needs**

Many opportunities identified in this report can be incorporated into the Conasauga/Wildcat EA process. If there are some opportunities identified that will not be incorporated into the EA, they will require a site-specific NEPA analysis in the future when the decision is made to implement them (activities other than maintenance and administrative decisions).

## **STEP 6 REPORTING**

### **Purpose and Products**

The purpose of this step is to:

- report the key findings of the analysis.

The products of this step are:

- a report including maps, analyses, and test documentation of the travel analysis, and
- maps that show the data and information used in the analysis, and the opportunities identified during the analysis.

### **Report**

This report will be reviewed by the Cherokee NF, and shared with other offices in the Forest Service that are also working on travel analysis. This report is available to the public if requested, and will be part of the Conasauga/Wildcat Creek Assessment project file.

### **Maps**

**Map 1** Watershed Boundary with RLRMP Management Prescriptions

**Map #2** Transportation System

**Map #3** Proposed Changes to Transportation System

## REFERENCES

### **Recreation**

USDA Forest Service. 2004. Revised Cherokee National Forest Land and Resource Management Plan 2004. Cleveland, TN.

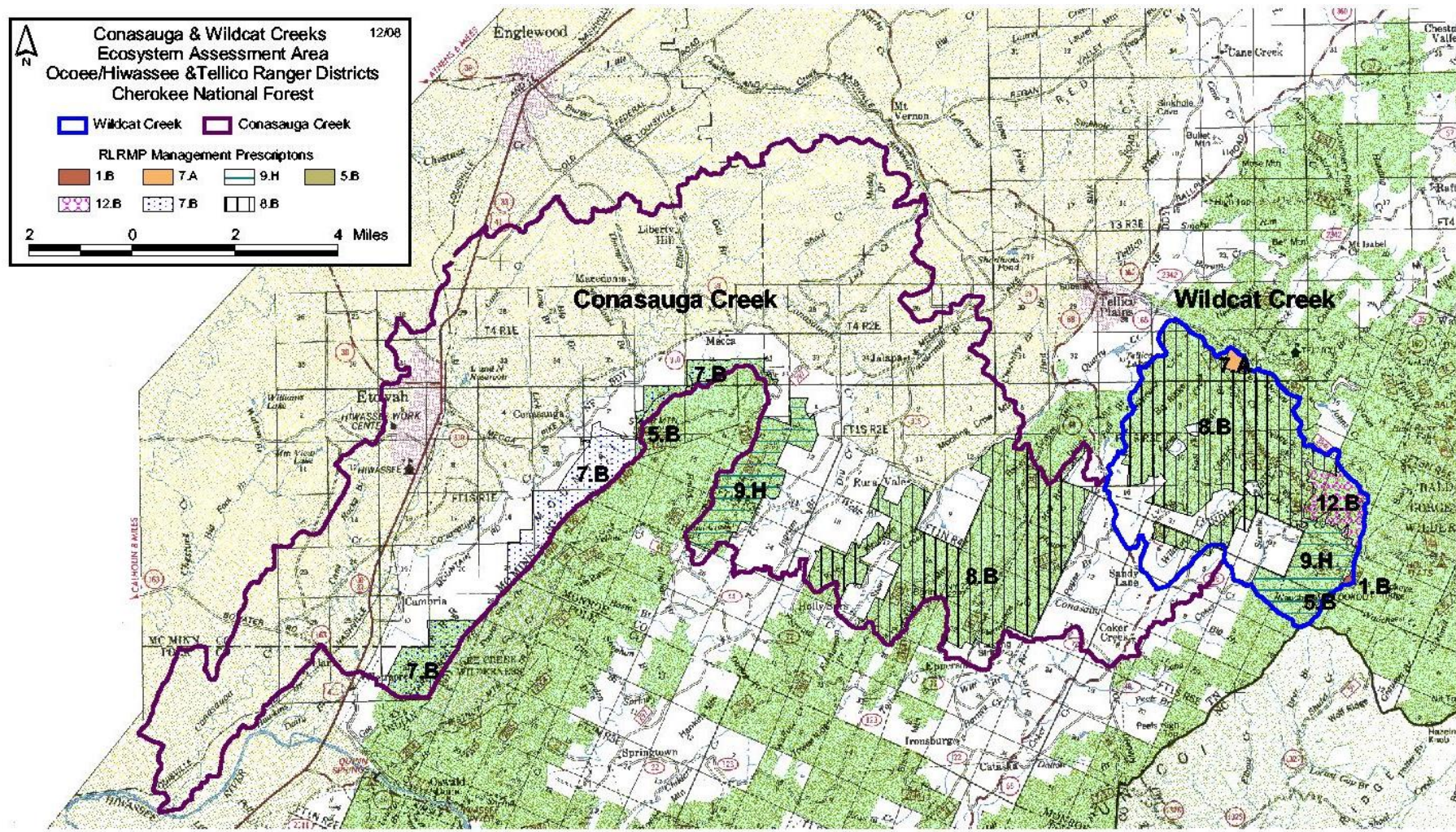
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USDA Forest Service (2009), Cherokee NF, GIS Data Base.

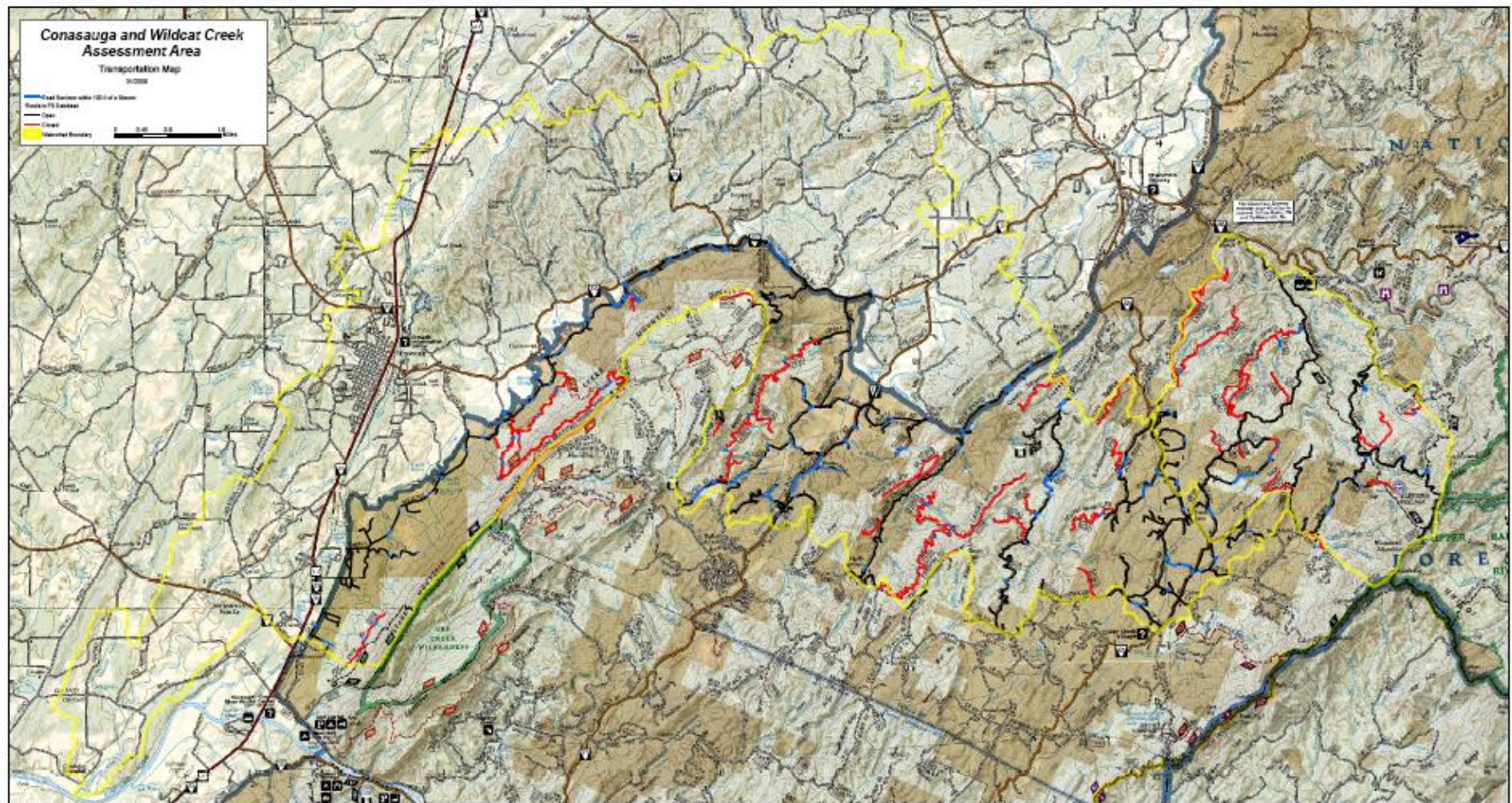


Map #1 Watershed Boundary with RLRMP Management Prescriptions





## Map #2 Transportation System





### Map #3 Proposed Changes to Transportation System

